

November 20, 2013

FAL Project ID: 8162

Mr. Mark Katchen
Phylmar Group
2342 Manning Avenue
Los Angeles, CA 90064

Dear Mr. Katchen,

Attached are the results for Frontier Analytical Laboratory project **8162**. This corresponds to your project number **365-001A** and project name **MHS/Cabrillo Monitoring**. Fifteen solid samples were received on 11/7/2013 in good condition. All fifteen solid samples were extracted and analyzed by EPA Method 1668C for all 209 polychlorinated biphenyls (PCBs). In addition, the total PCB concentration is listed in the upper right hand portion of page one of each sample data page. **Please note the results are reported in pg/g.** The Phylmar Group requested a turnaround time of ten business days for project **8162**.

The following report consists of an Analytical Data section and a Sample Receipt section. The Analytical Data section contains our project-sample tracking log and the analytical results. The Sample Receipt section contains your chain of custody, our sample login form and the sample photo. The attached results are specifically for the samples referenced in this report only. These results shall not be reproduced except in full. Frontier Analytical Laboratory's NELAP Certificate number is 02113CA. This report has been emailed to you as a PDF file. A hardcopy will not be sent to you unless specifically requested.

If you have any questions regarding project **8162**, please contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,



Bradley B. Silverbush
Director of Operations

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **8162**

Received on: **11/07/2013**

Project Due: **11/22/2013**

Storage: **F2**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
8162-001-SA	0	365-001A	SM20131106-B-1A	EPA 1668 PCB	Solid	11/06/2013	NP	11/06/2014
8162-002-SA	0	365-001A	SM20131106-B-1B	EPA 1668 PCB	Solid	11/06/2013	NP	11/06/2014
8162-003-SA	0	365-001A	SM20131106-B-2A	EPA 1668 PCB	Solid	11/06/2013	NP	11/06/2014
8162-004-SA	0	365-001A	SM20131106-B-2B	EPA 1668 PCB	Solid	11/06/2013	NP	11/06/2014
8162-005-SA	0	365-001A	SM20131106-B-3A	EPA 1668 PCB	Solid	11/06/2013	NP	11/06/2014
8162-006-SA	0	365-001A	SM20131106-B-3B	EPA 1668 PCB	Solid	11/06/2013	NP	11/06/2014
8162-007-SA	0	365-001A	SM20131106-B-4A	EPA 1668 PCB	Solid	11/06/2013	NP	11/06/2014
8162-008-SA	0	365-001A	SM20131106-B-4B	EPA 1668 PCB	Solid	11/06/2013	NP	11/06/2014
8162-009-SA	0	365-001A	SM20131106-B-5A	EPA 1668 PCB	Solid	11/06/2013	NP	11/06/2014
8162-010-SA	0	365-001A	SM20131106-B-5B	EPA 1668 PCB	Solid	11/06/2013	NP	11/06/2014
8162-011-SA	0	365-001A	SM20131106-B-6A	EPA 1668 PCB	Solid	11/06/2013	NP	11/06/2014
8162-012-SA	0	365-001A	SM20131106-B-6B	EPA 1668 PCB	Solid	11/06/2013	NP	11/06/2014
8162-013-SA	0	365-001A	SM20131106-B-7A	EPA 1668 PCB	Solid	11/06/2013	NP	11/06/2014
8162-014-SA	0	365-001A	SM20131106-B-7B	EPA 1668 PCB	Solid	11/06/2013	NP	11/06/2014
8162-015-SA	0	365-001A	SM20131106-B-8A	EPA 1668 PCB	Solid	11/06/2013	NP	11/06/2014

EPA Modified Method 1668 PCBs



FAL ID: 8162-001-MB
Client ID: Method Blank
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: NA
Amount: 1.00 g

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013
Total Conc: 35.9

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	ND	4.11			PCB-51	ND	6.91		
PCB-2	ND	5.78			PCB-52	ND	5.59	C	69
PCB-3	ND	4.72			PCB-53	ND	7.16		
PCB-4	ND	6.53			PCB-54	ND	3.90		
PCB-5	ND	6.08			PCB-55	ND	5.13		
PCB-6	ND	4.81			PCB-56	ND	7.21	C	60
PCB-7	ND	5.77			PCB-57	ND	4.99		
PCB-8	ND	5.46			PCB-58	ND	5.41		
PCB-9	ND	5.51			PCB-59	-	-	C042	42
PCB-10	ND	5.41			PCB-60	-	-	C056	56
PCB-11	35.9	-	J		PCB-61	ND	5.27	C	70
PCB-12	ND	6.12			PCB-62	ND	5.72		
PCB-13	ND	5.36			PCB-63	ND	5.08		
PCB-14	ND	5.60			PCB-64	-	-	C041	41/71/72
PCB-15	ND	4.18			PCB-65	ND	5.34		
PCB-16	ND	5.36			PCB-66	ND	4.68	C	76
PCB-17	ND	6.47			PCB-67	ND	5.00		
PCB-18	ND	7.17			PCB-68	ND	4.94		
PCB-19	ND	5.25			PCB-69	-	-	C052	52
PCB-20	ND	5.30	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	ND	5.59			PCB-72	-	-	C041	41/64/71
PCB-23	ND	5.65			PCB-73	ND	5.46		
PCB-24	ND	5.53			PCB-74	ND	3.69		
PCB-25	ND	5.60			PCB-75	-	-	C048	48
PCB-26	ND	5.79			PCB-76	-	-	C066	66
PCB-27	ND	4.31			PCB-77	ND	5.62		
PCB-28	ND	5.00			PCB-78	ND	6.96		
PCB-29	ND	5.56			PCB-79	ND	6.94		
PCB-30	ND	4.65			PCB-80	ND	4.26		
PCB-31	ND	5.55			PCB-81	ND	6.38		
PCB-32	ND	4.76			PCB-82	ND	9.55		
PCB-33	-	-	C020	20/21	PCB-83	ND	7.73	C	112
PCB-34	ND	5.53			PCB-84	ND	9.29	C	92
PCB-35	ND	5.38			PCB-85	ND	7.44	C	116
PCB-36	ND	5.37			PCB-86	ND	7.56		
PCB-37	ND	3.82			PCB-87	ND	6.84	C	117/125
PCB-38	ND	5.53			PCB-88	ND	8.85	C	91
PCB-39	ND	5.61			PCB-89	ND	9.87		
PCB-40	ND	9.05			PCB-90	ND	8.27	C	101
PCB-41	ND	5.28	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	ND	5.81	C	59	PCB-92	-	-	C084	84
PCB-43	ND	5.81	C	49	PCB-93	ND	8.32		
PCB-44	ND	6.11			PCB-94	ND	9.75		
PCB-45	ND	7.68			PCB-95	ND	8.16		
PCB-46	ND	8.08			PCB-96	ND	6.25		
PCB-47	ND	5.96			PCB-97	ND	8.83		
PCB-48	ND	5.66	C	75	PCB-98	ND	7.18	C	102
PCB-49	-	-	C043	43	PCB-99	ND	8.09		
PCB-50	ND	6.66			PCB-100	ND	8.05		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-001-MB
Client ID: Method Blank
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: NA
Amount: 1.00 g

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	ND	7.45		
PCB-102	-	-	C098	98	PCB-152	ND	4.82		
PCB-103	ND	7.39			PCB-153	ND	6.32		
PCB-104	ND	4.53			PCB-154	ND	5.42		
PCB-105	ND	7.87			PCB-155	ND	3.48		
PCB-106	ND	7.57	C	118	PCB-156	ND	5.28		
PCB-107	ND	7.55	C	108	PCB-157	ND	6.55		
PCB-108	-	-	C107	107	PCB-158	ND	5.63	C	160
PCB-109	ND	7.18			PCB-159	ND	5.32		
PCB-110	ND	4.92			PCB-160	-	-	C158	158
PCB-111	ND	6.12	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	ND	7.08			PCB-163	-	-	C138	138/164
PCB-114	ND	6.67			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	ND	5.81		
PCB-117	-	-	C087	87/125	PCB-167	ND	5.99		
PCB-118	-	-	C106	106	PCB-168	ND	6.07		
PCB-119	ND	6.17			PCB-169	ND	4.13		
PCB-120	ND	5.75			PCB-170	ND	8.93		
PCB-121	ND	6.45			PCB-171	ND	7.52		
PCB-122	ND	7.94			PCB-172	ND	8.22		
PCB-123	ND	6.74			PCB-173	ND	8.97		
PCB-124	ND	7.06			PCB-174	ND	7.77		
PCB-125	-	-	C087	87/117	PCB-175	ND	7.37		
PCB-126	ND	6.44			PCB-176	ND	5.56		
PCB-127	ND	7.68			PCB-177	ND	8.60		
PCB-128	ND	6.90	C	162	PCB-178	ND	7.62		
PCB-129	ND	8.56			PCB-179	ND	5.38		
PCB-130	ND	7.98			PCB-180	ND	7.23		
PCB-131	ND	7.73	C	133	PCB-181	ND	8.19		
PCB-132	ND	6.42	C	161	PCB-182	ND	6.97	C	187
PCB-133	-	-	C131	131	PCB-183	ND	6.81		
PCB-134	ND	7.87	C	143	PCB-184	ND	5.48		
PCB-135	ND	7.50			PCB-185	ND	7.94		
PCB-136	ND	4.60			PCB-186	ND	5.90		
PCB-137	ND	8.99			PCB-187	-	-	C182	182
PCB-138	ND	5.13	C	163/164	PCB-188	ND	4.43		
PCB-139	ND	7.08	C	149	PCB-189	ND	4.07		
PCB-140	ND	7.16			PCB-190	ND	6.49		
PCB-141	ND	7.42			PCB-191	ND	5.98		
PCB-142	ND	8.47			PCB-192	ND	6.71		
PCB-143	-	-	C134	134	PCB-193	ND	5.80		
PCB-144	ND	7.21			PCB-194	ND	6.26		
PCB-145	ND	5.07			PCB-195	ND	7.74		
PCB-146	ND	6.11	C	165	PCB-196	ND	7.44	C	203
PCB-147	ND	6.86			PCB-197	ND	5.69		
PCB-148	ND	6.81			PCB-198	ND	8.29		
PCB-149	-	-	C139	139	PCB-199	ND	8.53		
PCB-150	ND	5.11			PCB-200	ND	5.49		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-001-MB
Client ID: Method Blank
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: NA
Amount: 1.00 g

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013

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Compound	Conc	DL	Qual	Coeluters
PCB-201	ND	5.64		
PCB-202	ND	4.28		
PCB-203	-	-	C196	196
PCB-204	ND	5.38		
PCB-205	ND	3.75		
PCB-206	ND	6.15		
PCB-207	ND	7.10		
PCB-208	ND	5.00		
PCB-209	ND	5.10		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	86.1	5.00 - 145	
13C-PCB-3	81.8	5.00 - 145	
13C-PCB-4	84.0	5.00 - 145	
13C-PCB-15	82.8	5.00 - 145	
13C-PCB-19	83.6	5.00 - 145	
13C-PCB-37	86.3	5.00 - 145	
13C-PCB-54	90.3	5.00 - 145	
13C-PCB-77	80.9	10.0 - 145	
13C-PCB-81	79.6	10.0 - 145	
13C-PCB-104	85.4	10.0 - 145	
13C-PCB-105	86.0	10.0 - 145	
13C-PCB-114	88.9	10.0 - 145	
13C-PCB-118	88.2	10.0 - 145	
13C-PCB-123	89.2	10.0 - 145	
13C-PCB-126	84.6	10.0 - 145	
13C-PCB-155	89.2	10.0 - 145	
13C-PCB-156	87.2	10.0 - 145	
13C-PCB-157	86.6	10.0 - 145	
13C-PCB-167	89.0	10.0 - 145	
13C-PCB-169	86.4	10.0 - 145	
13C-PCB-188	89.9	10.0 - 145	
13C-PCB-189	85.6	10.0 - 145	
13C-PCB-202	87.6	10.0 - 145	
13C-PCB-205	88.2	10.0 - 145	
13C-PCB-206	86.3	10.0 - 145	
13C-PCB-208	90.1	10.0 - 145	
13C-PCB-209	90.4	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	90.3	5.00 - 145	
13C-PCB-111	80.0	10.0 - 145	
13C-PCB-178	86.8	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

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EPA Modified Method 1668 PCBs



FAL ID: 8162-001-MB
Client ID: Method Blank
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: NA
Amount: 1.00 g

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013
Total Conc: 0.00

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	ND	3.69			PCB-51	ND	8.48		
PCB-2	ND	5.28			PCB-52	ND	6.81	C	69
PCB-3	ND	4.24			PCB-53	ND	8.85		
PCB-4	ND	8.75			PCB-54	ND	4.61		
PCB-5	ND	8.85			PCB-55	ND	6.28		
PCB-6	ND	7.00			PCB-56	ND	8.40	C	60
PCB-7	ND	8.83			PCB-57	ND	6.14		
PCB-8	ND	8.63			PCB-58	ND	6.85		
PCB-9	ND	8.10			PCB-59	-	-	C042	42
PCB-10	ND	8.96			PCB-60	-	-	C056	56
PCB-11	ND	9.01			PCB-61	ND	6.66	C	70
PCB-12	ND	9.88			PCB-62	ND	7.16		
PCB-13	ND	7.95			PCB-63	ND	6.37		
PCB-14	ND	8.53			PCB-64	-	-	C041	41/71/72
PCB-15	ND	6.60			PCB-65	ND	6.33		
PCB-16	ND	5.65			PCB-66	ND	5.86	C	76
PCB-17	ND	6.68			PCB-67	ND	6.17		
PCB-18	ND	7.55			PCB-68	ND	5.98		
PCB-19	ND	5.48			PCB-69	-	-	C052	52
PCB-20	ND	6.68	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	ND	7.04			PCB-72	-	-	C041	41/64/71
PCB-23	ND	7.32			PCB-73	ND	7.15		
PCB-24	ND	5.25			PCB-74	ND	4.57		
PCB-25	ND	6.75			PCB-75	-	-	C048	48
PCB-26	ND	7.04			PCB-76	-	-	C066	66
PCB-27	ND	4.89			PCB-77	ND	7.63		
PCB-28	ND	6.19			PCB-78	ND	9.46		
PCB-29	ND	6.84			PCB-79	ND	9.40		
PCB-30	ND	4.83			PCB-80	ND	5.27		
PCB-31	ND	6.85			PCB-81	ND	8.42		
PCB-32	ND	4.90			PCB-82	ND	15.6		
PCB-33	-	-	C020	20/21	PCB-83	ND	11.3	C	112
PCB-34	ND	6.96			PCB-84	ND	13.2	C	92
PCB-35	ND	7.16			PCB-85	ND	10.6	C	116
PCB-36	ND	7.02			PCB-86	ND	11.5		
PCB-37	ND	5.10			PCB-87	ND	10.0	C	117/125
PCB-38	ND	7.08			PCB-88	ND	8.95	C	91
PCB-39	ND	7.40			PCB-89	ND	14.1		
PCB-40	ND	9.06			PCB-90	ND	12.1	C	101
PCB-41	ND	6.40	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	ND	6.96	C	59	PCB-92	-	-	C084	84
PCB-43	ND	7.19	C	49	PCB-93	ND	9.38		
PCB-44	ND	7.34			PCB-94	ND	10.2		
PCB-45	ND	9.49			PCB-95	ND	9.46		
PCB-46	ND	9.80			PCB-96	ND	6.39		
PCB-47	ND	7.64			PCB-97	ND	12.5		
PCB-48	ND	6.89	C	75	PCB-98	ND	7.74	C	102
PCB-49	-	-	C043	43	PCB-99	ND	12.2		
PCB-50	ND	8.11			PCB-100	ND	8.51		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-001-MB
Client ID: Method Blank
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: NA
Amount: 1.00 g

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	ND	14.4		
PCB-102	-	-	C098	98	PCB-152	ND	8.18		
PCB-103	ND	7.80			PCB-153	ND	12.3		
PCB-104	ND	4.66			PCB-154	ND	8.88		
PCB-105	ND	11.8			PCB-155	ND	5.84		
PCB-106	ND	12.6	C	118	PCB-156	ND	11.8		
PCB-107	ND	12.5	C	108	PCB-157	ND	12.4		
PCB-108	-	-	C107	107	PCB-158	ND	11.3	C	160
PCB-109	ND	10.3			PCB-159	ND	10.7		
PCB-110	ND	6.94			PCB-160	-	-	C158	158
PCB-111	ND	9.02	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	ND	10.1			PCB-163	-	-	C138	138/164
PCB-114	ND	13.4			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	ND	11.7		
PCB-117	-	-	C087	87/125	PCB-167	ND	10.6		
PCB-118	-	-	C106	106	PCB-168	ND	12.0		
PCB-119	ND	9.06			PCB-169	ND	9.44		
PCB-120	ND	8.05			PCB-170	ND	11.7		
PCB-121	ND	7.10			PCB-171	ND	9.88		
PCB-122	ND	12.5			PCB-172	ND	10.5		
PCB-123	ND	12.3			PCB-173	ND	11.4		
PCB-124	ND	12.1			PCB-174	ND	9.84		
PCB-125	-	-	C087	87/117	PCB-175	ND	9.72		
PCB-126	ND	10.9			PCB-176	ND	7.06		
PCB-127	ND	13.1			PCB-177	ND	11.4		
PCB-128	ND	13.9	C	162	PCB-178	ND	9.95		
PCB-129	ND	17.0			PCB-179	ND	7.03		
PCB-130	ND	16.7			PCB-180	ND	9.24		
PCB-131	ND	15.3	C	133	PCB-181	ND	11.1		
PCB-132	ND	13.5	C	161	PCB-182	ND	8.92	C	187
PCB-133	-	-	C131	131	PCB-183	ND	8.93		
PCB-134	ND	15.6	C	143	PCB-184	ND	6.98		
PCB-135	ND	16.9			PCB-185	ND	10.2		
PCB-136	ND	8.50			PCB-186	ND	7.64		
PCB-137	ND	16.9			PCB-187	-	-	C182	182
PCB-138	ND	10.4	C	163/164	PCB-188	ND	5.65		
PCB-139	ND	14.0	C	149	PCB-189	ND	5.56		
PCB-140	ND	14.0			PCB-190	ND	8.32		
PCB-141	ND	15.5			PCB-191	ND	7.73		
PCB-142	ND	17.6			PCB-192	ND	8.57		
PCB-143	-	-	C134	134	PCB-193	ND	7.44		
PCB-144	ND	12.5			PCB-194	ND	8.54		
PCB-145	ND	8.68			PCB-195	ND	9.64		
PCB-146	ND	12.3	C	165	PCB-196	ND	8.58	C	203
PCB-147	ND	13.8			PCB-197	ND	6.60		
PCB-148	ND	9.92			PCB-198	ND	9.23		
PCB-149	-	-	C139	139	PCB-199	ND	10.1		
PCB-150	ND	8.59			PCB-200	ND	6.35		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-001-MB
Client ID: Method Blank
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: NA
Amount: 1.00 g

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters
PCB-201	ND	6.47		
PCB-202	ND	4.93		
PCB-203	-	-	C196	196
PCB-204	ND	6.40		
PCB-205	ND	4.93		
PCB-206	ND	6.82		
PCB-207	ND	7.21		
PCB-208	ND	5.23		
PCB-209	ND	4.78		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	88.6	5.00 - 145	
13C-PCB-3	84.9	5.00 - 145	
13C-PCB-4	91.5	5.00 - 145	
13C-PCB-15	88.0	5.00 - 145	
13C-PCB-19	88.0	5.00 - 145	
13C-PCB-37	86.5	5.00 - 145	
13C-PCB-54	93.2	5.00 - 145	
13C-PCB-77	82.2	10.0 - 145	
13C-PCB-81	92.0	10.0 - 145	
13C-PCB-104	94.3	10.0 - 145	
13C-PCB-105	90.9	10.0 - 145	
13C-PCB-114	89.3	10.0 - 145	
13C-PCB-118	89.5	10.0 - 145	
13C-PCB-123	95.0	10.0 - 145	
13C-PCB-126	85.4	10.0 - 145	
13C-PCB-155	94.1	10.0 - 145	
13C-PCB-156	91.0	10.0 - 145	
13C-PCB-157	91.8	10.0 - 145	
13C-PCB-167	92.5	10.0 - 145	
13C-PCB-169	89.6	10.0 - 145	
13C-PCB-188	93.2	10.0 - 145	
13C-PCB-189	90.8	10.0 - 145	
13C-PCB-202	95.0	10.0 - 145	
13C-PCB-205	84.1	10.0 - 145	
13C-PCB-206	92.8	10.0 - 145	
13C-PCB-208	87.9	10.0 - 145	
13C-PCB-209	91.8	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	87.8	5.00 - 145	
13C-PCB-111	85.7	10.0 - 145	
13C-PCB-178	85.0	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

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EPA Modified Method 1668
PCBs



FAL ID: 8162-001-OPR
Client ID: OPR
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: NA
Amount: 1.00 g

ICal: 1668FAL4-10-24-13
GC Column: DB1
Units: ng/ml

Acquired: 11-15-2013

Compound	% Recovery	QC Limits	Qual	Internal Standards	% Recovery	QC Limits	Qual
PCB-1	106	60.0 - 135		13C-PCB-1	75.0	15.0 - 145	
PCB-3	108	60.0 - 135		13C-PCB-3	69.7	15.0 - 145	
PCB-4	106	60.0 - 135		13C-PCB-4	85.9	15.0 - 145	
PCB-15	106	60.0 - 135		13C-PCB-15	81.5	15.0 - 145	
PCB-19	107	60.0 - 135		13C-PCB-19	81.4	15.0 - 145	
PCB-37	102	60.0 - 135		13C-PCB-37	85.3	15.0 - 145	
PCB-54	96.6	60.0 - 135		13C-PCB-54	101	15.0 - 145	
PCB-77	97.0	60.0 - 135		13C-PCB-77	92.0	40.0 - 145	
PCB-81	102	60.0 - 135		13C-PCB-81	87.0	40.0 - 145	
PCB-104	104	60.0 - 135		13C-PCB-104	81.0	40.0 - 145	
PCB-105	103	60.0 - 135		13C-PCB-105	102	40.0 - 145	
PCB-114	107	60.0 - 135		13C-PCB-114	105	40.0 - 145	
PCB-118	109	60.0 - 135		13C-PCB-118	103	40.0 - 145	
PCB-123	109	60.0 - 135		13C-PCB-123	110	40.0 - 145	
PCB-126	108	60.0 - 135		13C-PCB-126	99.1	40.0 - 145	
PCB-155	108	60.0 - 135		13C-PCB-155	87.3	40.0 - 145	
PCB-156	111	60.0 - 135		13C-PCB-156	92.6	40.0 - 145	
PCB-157	114	60.0 - 135		13C-PCB-157	90.9	40.0 - 145	
PCB-167	112	60.0 - 135		13C-PCB-167	91.2	40.0 - 145	
PCB-169	110	60.0 - 135		13C-PCB-169	93.6	40.0 - 145	
PCB-188	110	60.0 - 135		13C-PCB-188	96.0	40.0 - 145	
PCB-189	114	60.0 - 135		13C-PCB-189	89.9	40.0 - 145	
PCB-202	111	60.0 - 135		13C-PCB-202	87.6	40.0 - 145	
PCB-205	114	60.0 - 135		13C-PCB-205	78.4	40.0 - 145	
PCB-206	107	60.0 - 135		13C-PCB-206	87.7	40.0 - 145	
PCB-208	98.8	60.0 - 135		13C-PCB-208	88.6	40.0 - 145	
PCB-209	122	60.0 - 135		13C-PCB-209	75.1	40.0 - 145	
				Cleanup Surrogate	% Recovery	QC limits	Qual
				13C-PCB-28	90.6	15.0 - 145	
				13C-PCB-111	85.1	40.0 - 145	
				13C-PCB-178	87.9	40.0 - 145	

Analyst: 

Date: 11/20/2013

Reviewed By: 

Date: 11/20/2013

EPA Modified Method 1668
PCBs



FAL ID: 8162-001-OPR
Client ID: OPR
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: NA
Amount: 1.00 g

ICal: 1668FAL4-10-24-13
GC Column: DB1
Units: ng/ml

Acquired: 11-16-2013

Compound	% Recovery	QC Limits	Qual	Internal Standards	% Recovery	QC Limits	Qual
PCB-1	102	60.0 - 135		13C-PCB-1	72.8	15.0 - 145	
PCB-3	101	60.0 - 135		13C-PCB-3	70.2	15.0 - 145	
PCB-4	102	60.0 - 135		13C-PCB-4	87.3	15.0 - 145	
PCB-15	105	60.0 - 135		13C-PCB-15	79.8	15.0 - 145	
PCB-19	102	60.0 - 135		13C-PCB-19	81.2	15.0 - 145	
PCB-37	107	60.0 - 135		13C-PCB-37	81.8	15.0 - 145	
PCB-54	94.2	60.0 - 135		13C-PCB-54	104	15.0 - 145	
PCB-77	99.8	60.0 - 135		13C-PCB-77	85.4	40.0 - 145	
PCB-81	104	60.0 - 135		13C-PCB-81	83.0	40.0 - 145	
PCB-104	98.6	60.0 - 135		13C-PCB-104	80.3	40.0 - 145	
PCB-105	101	60.0 - 135		13C-PCB-105	101	40.0 - 145	
PCB-114	103	60.0 - 135		13C-PCB-114	105	40.0 - 145	
PCB-118	102	60.0 - 135		13C-PCB-118	104	40.0 - 145	
PCB-123	103	60.0 - 135		13C-PCB-123	112	40.0 - 145	
PCB-126	108	60.0 - 135		13C-PCB-126	94.7	40.0 - 145	
PCB-155	105	60.0 - 135		13C-PCB-155	80.7	40.0 - 145	
PCB-156	107	60.0 - 135		13C-PCB-156	92.0	40.0 - 145	
PCB-157	110	60.0 - 135		13C-PCB-157	88.6	40.0 - 145	
PCB-167	106	60.0 - 135		13C-PCB-167	90.5	40.0 - 145	
PCB-169	106	60.0 - 135		13C-PCB-169	88.3	40.0 - 145	
PCB-188	105	60.0 - 135		13C-PCB-188	97.4	40.0 - 145	
PCB-189	107	60.0 - 135		13C-PCB-189	86.0	40.0 - 145	
PCB-202	108	60.0 - 135		13C-PCB-202	88.1	40.0 - 145	
PCB-205	113	60.0 - 135		13C-PCB-205	81.5	40.0 - 145	
PCB-206	101	60.0 - 135		13C-PCB-206	87.3	40.0 - 145	
PCB-208	98.0	60.0 - 135		13C-PCB-208	87.4	40.0 - 145	
PCB-209	118	60.0 - 135		13C-PCB-209	72.8	40.0 - 145	
				Cleanup Surrogate	% Recovery	QC limits	Qual
				13C-PCB-28	93.6	15.0 - 145	
				13C-PCB-111	81.1	40.0 - 145	
				13C-PCB-178	91.2	40.0 - 145	

Analyst: 

Date: 11/20/2013

Reviewed By: 

Date: 11/20/2013

EPA Modified Method 1668 PCBs



FAL ID: 8162-001-SA
Client ID: SM20131106-B-1A
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: 11-07-2013
Amount: 0.52 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013
Total Conc: 1870000000

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	2550	-	J		PCB-51	491000	-		
PCB-2	1260	-	J		PCB-52	213000000	-	C	69
PCB-3	4280	-	J		PCB-53	4070000	-		
PCB-4	14000	-			PCB-54	8390	-		
PCB-5	14700	-			PCB-55	1320000	-		
PCB-6	41100	-			PCB-56	18700000	-	C	60
PCB-7	5660	-	J		PCB-57	106000	-		
PCB-8	234000	-			PCB-58	30200	-		
PCB-9	8910	-			PCB-59	-	-	C042	42
PCB-10	1500	-	J		PCB-60	-	-	C056	56
PCB-11	27100	-	B		PCB-61	134000000	-	C	70
PCB-12	39900	-			PCB-62	ND	521		
PCB-13	76100	-			PCB-63	1430000	-		
PCB-14	ND	419			PCB-64	-	-	C041	41/71/72
PCB-15	605000	-			PCB-65	ND	486		
PCB-16	985000	-			PCB-66	41300000	-	C	76
PCB-17	686000	-			PCB-67	279000	-		
PCB-18	2120000	-			PCB-68	61400	-		
PCB-19	46400	-			PCB-69	-	-	C052	52
PCB-20	4820000	-	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	3070000	-			PCB-72	-	-	C041	41/64/71
PCB-23	7810	-			PCB-73	163000	-		
PCB-24	20600	-			PCB-74	22200000	-		
PCB-25	449000	-			PCB-75	-	-	C048	48
PCB-26	1000000	-			PCB-76	-	-	C066	66
PCB-27	150000	-			PCB-77	315000	-		
PCB-28	5400000	-			PCB-78	353000	-		
PCB-29	45900	-			PCB-79	1320000	-		
PCB-30	ND	160			PCB-80	ND	388		
PCB-31	8940000	-			PCB-81	2540000	-		
PCB-32	844000	-			PCB-82	14300000	-		
PCB-33	-	-	C020	20/21	PCB-83	6660000	-	C	112
PCB-34	15600	-			PCB-84	101000000	-	C	92
PCB-35	114000	-			PCB-85	18800000	-	C	116
PCB-36	5000	-	J		PCB-86	363000	-		
PCB-37	1710000	-			PCB-87	69200000	-	C	117/125
PCB-38	135000	-			PCB-88	37300000	-	C	91
PCB-39	5630	-	J		PCB-89	1230000	-		
PCB-40	5390000	-			PCB-90	216000000	-	C	101
PCB-41	37100000	-	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	6020000	-	C	59	PCB-92	-	-	C084	84
PCB-43	43900000	-	C	49	PCB-93	ND	1620		
PCB-44	77600000	-			PCB-94	1050000	-		
PCB-45	2000000	-			PCB-95	34400000	-		
PCB-46	944000	-			PCB-96	1680000	-		
PCB-47	5260000	-			PCB-97	51700000	-		
PCB-48	3610000	-	C	75	PCB-98	ND	1400	C	102
PCB-49	-	-	C043	43	PCB-99	73800000	-		
PCB-50	14700	-			PCB-100	454000	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-001-SA
Client ID: SM20131106-B-1A
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: 11-07-2013
Amount: 0.52 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	18800000	-		
PCB-102	-	-	C098	98	PCB-152	228000	-		
PCB-103	1240000	-			PCB-153	47900000	-		
PCB-104	4630	-	J		PCB-154	797000	-		
PCB-105	25800000	-			PCB-155	ND	1000		
PCB-106	74800000	-	C	118	PCB-156	2590000	-		
PCB-107	5700000	-	C	108	PCB-157	541000	-		
PCB-108	-	-	C107	107	PCB-158	6940000	-	C	160
PCB-109	25900	-			PCB-159	109000	-		
PCB-110	121000000	-			PCB-160	-	-	C158	158
PCB-111	4000000	-	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	161000	-			PCB-163	-	-	C138	138/164
PCB-114	2320000	-			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	313000	-		
PCB-117	-	-	C087	87/125	PCB-167	1230000	-		
PCB-118	-	-	C106	106	PCB-168	76000	-		
PCB-119	1930000	-			PCB-169	ND	922		
PCB-120	186000	-			PCB-170	1180000	-		
PCB-121	ND	1250			PCB-171	842000	-		
PCB-122	855000	-			PCB-172	255000	-		
PCB-123	1250000	-			PCB-173	98800	-		
PCB-124	4400000	-			PCB-174	2360000	-		
PCB-125	-	-	C087	87/117	PCB-175	155000	-		
PCB-126	157000	-			PCB-176	826000	-		
PCB-127	52400	-			PCB-177	1380000	-		
PCB-128	7170000	-	C	162	PCB-178	518000	-		
PCB-129	3240000	-			PCB-179	2060000	-		
PCB-130	3660000	-			PCB-180	2250000	-		
PCB-131	3040000	-	C	133	PCB-181	106000	-		
PCB-132	29000000	-	C	161	PCB-182	2400000	-	C	187
PCB-133	-	-	C131	131	PCB-183	1680000	-		
PCB-134	6950000	-	C	143	PCB-184	11200	-		
PCB-135	14000000	-			PCB-185	228000	-		
PCB-136	19800000	-			PCB-186	4500	-	J	
PCB-137	5040000	-			PCB-187	-	-	C182	182
PCB-138	44800000	-	C	163/164	PCB-188	8130	-		
PCB-139	79500000	-	C	149	PCB-189	17600	-		
PCB-140	430000	-			PCB-190	190000	-		
PCB-141	10800000	-			PCB-191	62000	-		
PCB-142	35700	-			PCB-192	ND	1290		
PCB-143	-	-	C134	134	PCB-193	95200	-		
PCB-144	6290000	-			PCB-194	29100	-		
PCB-145	94900	-			PCB-195	28500	-		
PCB-146	7530000	-	C	165	PCB-196	105000	-	C	203
PCB-147	3010000	-			PCB-197	13400	-		
PCB-148	13700	-			PCB-198	5920	-	J	
PCB-149	-	-	C139	139	PCB-199	108000	-		
PCB-150	202000	-			PCB-200	29200	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-001-SA
Client ID: SM20131106-B-1A
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: 11-07-2013
Amount: 0.52 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013

Page 3 of 3

Compound	Conc	DL	Qual	Coeluters
PCB-201	45100	-		
PCB-202	45100	-		
PCB-203	-	-	C196	196
PCB-204	ND	352		
PCB-205	1000	-	J	
PCB-206	2140	-	J	
PCB-207	1630	-	J	
PCB-208	2260	-	J	
PCB-209	984	-	J	

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	93.0	5.00 - 145	
13C-PCB-3	85.3	5.00 - 145	
13C-PCB-4	91.7	5.00 - 145	
13C-PCB-15	88.8	5.00 - 145	
13C-PCB-19	101	5.00 - 145	
13C-PCB-37	64.4	5.00 - 145	
13C-PCB-54	51.0	5.00 - 145	
13C-PCB-77	72.3	10.0 - 145	
13C-PCB-81	82.4	10.0 - 145	
13C-PCB-104	52.9	10.0 - 145	
13C-PCB-105	99.7	10.0 - 145	
13C-PCB-114	90.3	10.0 - 145	
13C-PCB-118	127	10.0 - 145	
13C-PCB-123	100	10.0 - 145	
13C-PCB-126	82.8	10.0 - 145	
13C-PCB-155	74.0	10.0 - 145	
13C-PCB-156	86.3	10.0 - 145	
13C-PCB-157	85.3	10.0 - 145	
13C-PCB-167	86.9	10.0 - 145	
13C-PCB-169	90.0	10.0 - 145	
13C-PCB-188	86.5	10.0 - 145	
13C-PCB-189	92.4	10.0 - 145	
13C-PCB-202	84.3	10.0 - 145	
13C-PCB-205	95.7	10.0 - 145	
13C-PCB-206	86.3	10.0 - 145	
13C-PCB-208	89.0	10.0 - 145	
13C-PCB-209	80.5	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	63.0	5.00 - 145	
13C-PCB-111	82.7	10.0 - 145	
13C-PCB-178	88.4	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

000013 of 000058

EPA Modified Method 1668 PCBs



FAL ID: 8162-002-SA
Client ID: SM20131106-B-1B
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: 11-07-2013
Amount: 0.98 g
% Solids: 97.14

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013
Total Conc: 15200000

Page 1 of 3

Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	1820	-			PCB-51	8380	-		
PCB-2	425	-			PCB-52	1030000	-	C	69
PCB-3	1920	-			PCB-53	46900	-		
PCB-4	11300	-			PCB-54	261	-		
PCB-5	1470	-			PCB-55	10900	-		
PCB-6	6700	-			PCB-56	264000	-	C	60
PCB-7	1230	-			PCB-57	1500	-		
PCB-8	32400	-			PCB-58	539	-		
PCB-9	2220	-			PCB-59	-	-	C042	42
PCB-10	486	-			PCB-60	-	-	C056	56
PCB-11	7600	-	B		PCB-61	796000	-	C	70
PCB-12	1160	-			PCB-62	ND	8.31		
PCB-13	2700	-			PCB-63	12200	-		
PCB-14	ND	7.30			PCB-64	-	-	C041	41/71/72
PCB-15	13300	-			PCB-65	ND	7.75		
PCB-16	47900	-			PCB-66	326000	-	C	76
PCB-17	44600	-			PCB-67	8200	-		
PCB-18	136000	-			PCB-68	979	-		
PCB-19	6610	-			PCB-69	-	-	C052	52
PCB-20	135000	-	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	75900	-			PCB-72	-	-	C041	41/64/71
PCB-23	197	-			PCB-73	2880	-		
PCB-24	1340	-			PCB-74	153000	-		
PCB-25	10300	-			PCB-75	-	-	C048	48
PCB-26	29900	-			PCB-76	-	-	C066	66
PCB-27	7060	-			PCB-77	40000	-		
PCB-28	138000	-			PCB-78	3350	-		
PCB-29	1190	-			PCB-79	10200	-		
PCB-30	ND	4.20			PCB-80	ND	6.18		
PCB-31	211000	-			PCB-81	20300	-		
PCB-32	33300	-			PCB-82	152000	-		
PCB-33	-	-	C020	20/21	PCB-83	46700	-	C	112
PCB-34	535	-			PCB-84	558000	-	C	92
PCB-35	4520	-			PCB-85	172000	-	C	116
PCB-36	115	-			PCB-86	3450	-		
PCB-37	46300	-			PCB-87	496000	-	C	117/125
PCB-38	2420	-			PCB-88	182000	-	C	91
PCB-39	231	-			PCB-89	11200	-		
PCB-40	53900	-			PCB-90	1250000	-	C	101
PCB-41	286000	-	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	66300	-	C	59	PCB-92	-	-	C084	84
PCB-43	287000	-	C	49	PCB-93	ND	8.17		
PCB-44	435000	-			PCB-94	5390	-		
PCB-45	29900	-			PCB-95	1240000	-		
PCB-46	14600	-			PCB-96	9430	-		
PCB-47	51800	-			PCB-97	371000	-		
PCB-48	44200	-	C	75	PCB-98	ND	7.05	C	102
PCB-49	-	-	C043	43	PCB-99	460000	-		
PCB-50	347	-			PCB-100	2390	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-002-SA
Client ID: SM20131106-B-1B
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: 11-07-2013
Amount: 0.98 g
% Solids: 97.14

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	94400	-		
PCB-102	-	-	C098	98	PCB-152	1120	-		
PCB-103	6020	-			PCB-153	429000	-		
PCB-104	ND	4.44			PCB-154	5810	-		
PCB-105	366000	-			PCB-155	ND	11.1		
PCB-106	976000	-	C	118	PCB-156	39200	-		
PCB-107	65400	-	C	108	PCB-157	10500	-		
PCB-108	-	-	C107	107	PCB-158	73000	-	C	160
PCB-109	264	-			PCB-159	146	-		
PCB-110	936000	-			PCB-160	-	-	C158	158
PCB-111	23200	-	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	564	-			PCB-163	-	-	C138	138/164
PCB-114	23300	-			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	2710	-		
PCB-117	-	-	C087	87/125	PCB-167	16500	-		
PCB-118	-	-	C106	106	PCB-168	786	-		
PCB-119	14700	-			PCB-169	42.3	-		
PCB-120	1520	-			PCB-170	23900	-		
PCB-121	ND	6.33			PCB-171	11400	-		
PCB-122	11000	-			PCB-172	4620	-		
PCB-123	14400	-			PCB-173	976	-		
PCB-124	43400	-			PCB-174	33800	-		
PCB-125	-	-	C087	87/117	PCB-175	1870	-		
PCB-126	3390	-			PCB-176	6490	-		
PCB-127	465	-			PCB-177	20200	-		
PCB-128	97600	-	C	162	PCB-178	6400	-		
PCB-129	34500	-			PCB-179	16500	-		
PCB-130	44100	-			PCB-180	54800	-		
PCB-131	20700	-	C	133	PCB-181	766	-		
PCB-132	200000	-	C	161	PCB-182	39700	-	C	187
PCB-133	-	-	C131	131	PCB-183	22800	-		
PCB-134	40600	-	C	143	PCB-184	110	-		
PCB-135	80900	-			PCB-185	3700	-		
PCB-136	110000	-			PCB-186	35.7	-	J	
PCB-137	48000	-			PCB-187	-	-	C182	182
PCB-138	467000	-	C	163/164	PCB-188	57.7	-		
PCB-139	469000	-	C	149	PCB-189	446	-		
PCB-140	3320	-			PCB-190	4040	-		
PCB-141	96300	-			PCB-191	1120	-		
PCB-142	230	-			PCB-192	ND	13.7		
PCB-143	-	-	C134	134	PCB-193	2100	-		
PCB-144	28400	-			PCB-194	4050	-		
PCB-145	531	-			PCB-195	2420	-		
PCB-146	60400	-	C	165	PCB-196	8690	-	C	203
PCB-147	14700	-			PCB-197	432	-		
PCB-148	ND	21.7			PCB-198	536	-		
PCB-149	-	-	C139	139	PCB-199	8820	-		
PCB-150	1150	-			PCB-200	1340	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-002-SA
Client ID: SM20131106-B-1B
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: 11-07-2013
Amount: 0.98 g
% Solids: 97.14

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013

Page 3 of 3

Compound	Conc	DL	Qual	Coeluters
PCB-201	1740	-		
PCB-202	1960	-		
PCB-203	-	-	C196	196
PCB-204	ND	13.9		
PCB-205	146	-		
PCB-206	1280	-		
PCB-207	481	-		
PCB-208	666	-		
PCB-209	683	-		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	85.6	5.00 - 145	
13C-PCB-3	81.9	5.00 - 145	
13C-PCB-4	85.0	5.00 - 145	
13C-PCB-15	91.5	5.00 - 145	
13C-PCB-19	76.4	5.00 - 145	
13C-PCB-37	77.2	5.00 - 145	
13C-PCB-54	89.4	5.00 - 145	
13C-PCB-77	99.6	10.0 - 145	
13C-PCB-81	101	10.0 - 145	
13C-PCB-104	88.8	10.0 - 145	
13C-PCB-105	91.4	10.0 - 145	
13C-PCB-114	92.1	10.0 - 145	
13C-PCB-118	88.8	10.0 - 145	
13C-PCB-123	94.4	10.0 - 145	
13C-PCB-126	88.1	10.0 - 145	
13C-PCB-155	74.9	10.0 - 145	
13C-PCB-156	91.3	10.0 - 145	
13C-PCB-157	88.8	10.0 - 145	
13C-PCB-167	93.6	10.0 - 145	
13C-PCB-169	84.8	10.0 - 145	
13C-PCB-188	85.2	10.0 - 145	
13C-PCB-189	77.2	10.0 - 145	
13C-PCB-202	83.6	10.0 - 145	
13C-PCB-205	86.6	10.0 - 145	
13C-PCB-206	87.3	10.0 - 145	
13C-PCB-208	90.7	10.0 - 145	
13C-PCB-209	85.0	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	76.3	5.00 - 145	
13C-PCB-111	85.8	10.0 - 145	
13C-PCB-178	85.2	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

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EPA Modified Method 1668 PCBs



FAL ID: 8162-003-SA
Client ID: SM20131106-B-2A
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: 11-07-2013
Amount: 0.35 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013
Total Conc: 164000000

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	350	-			PCB-51	1000	-		
PCB-2	115	-			PCB-52	174000	-	C	69
PCB-3	344	-			PCB-53	3850	-		
PCB-4	440	-			PCB-54	ND	33.5		
PCB-5	134	-			PCB-55	9770	-		
PCB-6	460	-			PCB-56	130000	-	C	60
PCB-7	147	-			PCB-57	552	-		
PCB-8	1980	-			PCB-58	215	-		
PCB-9	192	-			PCB-59	-	-	C042	42
PCB-10	ND	29.1			PCB-60	-	-	C056	56
PCB-11	4690	-	B		PCB-61	547000	-	C	70
PCB-12	305	-			PCB-62	ND	49.1		
PCB-13	214	-			PCB-63	4340	-		
PCB-14	ND	30.0			PCB-64	-	-	C041	41/71/72
PCB-15	1010	-			PCB-65	ND	45.8		
PCB-16	2120	-			PCB-66	195000	-	C	76
PCB-17	2330	-			PCB-67	3230	-		
PCB-18	7230	-			PCB-68	376	-		
PCB-19	258	-			PCB-69	-	-	C052	52
PCB-20	8170	-	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	5060	-			PCB-72	-	-	C041	41/64/71
PCB-23	ND	46.3			PCB-73	189	-		
PCB-24	131	-			PCB-74	72800	-		
PCB-25	539	-			PCB-75	-	-	C048	48
PCB-26	1480	-			PCB-76	-	-	C066	66
PCB-27	312	-			PCB-77	213000	-		
PCB-28	10200	-			PCB-78	12200	-		
PCB-29	107	-	J		PCB-79	31800	-		
PCB-30	ND	24.3			PCB-80	ND	36.5		
PCB-31	12500	-			PCB-81	108000	-		
PCB-32	2000	-			PCB-82	1140000	-		
PCB-33	-	-	C020	20/21	PCB-83	172000	-	C	112
PCB-34	ND	45.4			PCB-84	1000000	-	C	92
PCB-35	832	-			PCB-85	812000	-	C	116
PCB-36	90.5	-	J		PCB-86	6150	-		
PCB-37	4610	-			PCB-87	2600000	-	C	117/125
PCB-38	311	-			PCB-88	205000	-	C	91
PCB-39	ND	46.0			PCB-89	12300	-		
PCB-40	11900	-			PCB-90	3310000	-	C	101
PCB-41	68400	-	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	12900	-	C	59	PCB-92	-	-	C084	84
PCB-43	41200	-	C	49	PCB-93	ND	90.5		
PCB-44	102000	-			PCB-94	4270	-		
PCB-45	2950	-			PCB-95	1270000	-		
PCB-46	1620	-			PCB-96	3280	-		
PCB-47	7510	-			PCB-97	1570000	-		
PCB-48	5980	-	C	75	PCB-98	ND	78.1	C	102
PCB-49	-	-	C043	43	PCB-99	1320000	-		
PCB-50	ND	57.2			PCB-100	1640	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-003-SA
Client ID: SM20131106-B-2A
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: 11-07-2013
Amount: 0.35 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	1830000	-		
PCB-102	-	-	C098	98	PCB-152	6080	-		
PCB-103	3660	-			PCB-153	17900000	-		
PCB-104	ND	49.2			PCB-154	71900	-		
PCB-105	8160000	-			PCB-155	ND	63.3		
PCB-106	14300000	-	C	118	PCB-156	2240000	-		
PCB-107	948000	-	C	108	PCB-157	866000	-		
PCB-108	-	-	C107	107	PCB-158	4110000	-	C	160
PCB-109	498	-			PCB-159	68900	-		
PCB-110	7390000	-			PCB-160	-	-	C158	158
PCB-111	86500	-	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	1620	-			PCB-163	-	-	C138	138/164
PCB-114	322000	-			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	190000	-		
PCB-117	-	-	C087	87/125	PCB-167	1550000	-		
PCB-118	-	-	C106	106	PCB-168	34500	-		
PCB-119	42400	-			PCB-169	4510	-		
PCB-120	10700	-			PCB-170	1910000	-		
PCB-121	ND	70.1			PCB-171	797000	-		
PCB-122	208000	-			PCB-172	328000	-		
PCB-123	239000	-			PCB-173	91800	-		
PCB-124	705000	-			PCB-174	2150000	-		
PCB-125	-	-	C087	87/117	PCB-175	105000	-		
PCB-126	357000	-			PCB-176	323000	-		
PCB-127	17000	-			PCB-177	1340000	-		
PCB-128	6170000	-	C	162	PCB-178	337000	-		
PCB-129	2100000	-			PCB-179	766000	-		
PCB-130	1850000	-			PCB-180	3250000	-		
PCB-131	587000	-	C	133	PCB-181	75200	-		
PCB-132	8610000	-	C	161	PCB-182	1860000	-	C	187
PCB-133	-	-	C131	131	PCB-183	1240000	-		
PCB-134	1180000	-	C	143	PCB-184	3490	-		
PCB-135	1720000	-			PCB-185	206000	-		
PCB-136	940000	-			PCB-186	2620	-		
PCB-137	2710000	-			PCB-187	-	-	C182	182
PCB-138	25300000	-	C	163/164	PCB-188	1910	-		
PCB-139	11900000	-	C	149	PCB-189	29500	-		
PCB-140	76100	-			PCB-190	338000	-		
PCB-141	4760000	-			PCB-191	82900	-		
PCB-142	3160	-			PCB-192	ND	155		
PCB-143	-	-	C134	134	PCB-193	133000	-		
PCB-144	623000	-			PCB-194	73500	-		
PCB-145	2960	-			PCB-195	65200	-		
PCB-146	2390000	-	C	165	PCB-196	178000	-	C	203
PCB-147	342000	-			PCB-197	12600	-		
PCB-148	ND	124			PCB-198	11700	-		
PCB-149	-	-	C139	139	PCB-199	158000	-		
PCB-150	4810	-			PCB-200	37400	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-003-SA
Client ID: SM20131106-B-2A
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: 11-07-2013
Amount: 0.35 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013

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Compound	Conc	DL	Qual	Coeluters
PCB-201	39800	-		
PCB-202	37500	-		
PCB-203	-	-	C196	196
PCB-204	238	-		
PCB-205	2990	-		
PCB-206	6880	-		
PCB-207	3410	-		
PCB-208	3450	-		
PCB-209	548	-		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	81.2	5.00 - 145	
13C-PCB-3	79.7	5.00 - 145	
13C-PCB-4	84.7	5.00 - 145	
13C-PCB-15	89.1	5.00 - 145	
13C-PCB-19	80.9	5.00 - 145	
13C-PCB-37	89.6	5.00 - 145	
13C-PCB-54	90.4	5.00 - 145	
13C-PCB-77	107	10.0 - 145	
13C-PCB-81	106	10.0 - 145	
13C-PCB-104	93.0	10.0 - 145	
13C-PCB-105	93.9	10.0 - 145	
13C-PCB-114	89.4	10.0 - 145	
13C-PCB-118	95.9	10.0 - 145	
13C-PCB-123	87.6	10.0 - 145	
13C-PCB-126	91.4	10.0 - 145	
13C-PCB-155	87.8	10.0 - 145	
13C-PCB-156	86.9	10.0 - 145	
13C-PCB-157	83.0	10.0 - 145	
13C-PCB-167	87.9	10.0 - 145	
13C-PCB-169	87.1	10.0 - 145	
13C-PCB-188	81.0	10.0 - 145	
13C-PCB-189	83.6	10.0 - 145	
13C-PCB-202	77.0	10.0 - 145	
13C-PCB-205	89.7	10.0 - 145	
13C-PCB-206	82.7	10.0 - 145	
13C-PCB-208	84.1	10.0 - 145	
13C-PCB-209	77.1	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	83.7	5.00 - 145	
13C-PCB-111	89.7	10.0 - 145	
13C-PCB-178	76.8	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

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EPA Modified Method 1668 PCBs



FAL ID: 8162-004-SA
Client ID: SM20131106-B-2B
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: 11-07-2013
Amount: 0.93 g
% Solids: 93.44

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013
Total Conc: 32300000

Page 1 of 3

Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	459	-			PCB-51	5980	-		
PCB-2	172	-			PCB-52	1600000	-	C	69
PCB-3	677	-			PCB-53	41200	-		
PCB-4	2100	-			PCB-54	191	-		
PCB-5	311	-			PCB-55	14600	-		
PCB-6	1360	-			PCB-56	251000	-	C	60
PCB-7	239	-			PCB-57	1140	-		
PCB-8	6260	-			PCB-58	346	-		
PCB-9	387	-			PCB-59	-	-	C042	42
PCB-10	103	-			PCB-60	-	-	C056	56
PCB-11	7200	-	B		PCB-61	1310000	-	C	70
PCB-12	361	-			PCB-62	ND	34.7		
PCB-13	1030	-			PCB-63	12900	-		
PCB-14	ND	16.8			PCB-64	-	-	C041	41/71/72
PCB-15	5950	-			PCB-65	ND	32.4		
PCB-16	21200	-			PCB-66	447000	-	C	76
PCB-17	18700	-			PCB-67	3560	-		
PCB-18	63000	-			PCB-68	1260	-		
PCB-19	3860	-			PCB-69	-	-	C052	52
PCB-20	60200	-	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	41500	-			PCB-72	-	-	C041	41/64/71
PCB-23	99.0	-			PCB-73	2090	-		
PCB-24	573	-			PCB-74	206000	-		
PCB-25	4910	-			PCB-75	-	-	C048	48
PCB-26	12300	-			PCB-76	-	-	C066	66
PCB-27	3410	-			PCB-77	39400	-		
PCB-28	62200	-			PCB-78	4760	-		
PCB-29	425	-			PCB-79	15600	-		
PCB-30	ND	9.95			PCB-80	ND	25.8		
PCB-31	98300	-			PCB-81	37200	-		
PCB-32	20300	-			PCB-82	303000	-		
PCB-33	-	-	C020	20/21	PCB-83	94200	-	C	112
PCB-34	182	-			PCB-84	1230000	-	C	92
PCB-35	1790	-			PCB-85	342000	-	C	116
PCB-36	70.5	-			PCB-86	3010	-		
PCB-37	26200	-			PCB-87	1130000	-	C	117/125
PCB-38	2250	-			PCB-88	384000	-	C	91
PCB-39	ND	13.0			PCB-89	14900	-		
PCB-40	52300	-			PCB-90	2860000	-	C	101
PCB-41	338000	-	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	60800	-	C	59	PCB-92	-	-	C084	84
PCB-43	358000	-	C	49	PCB-93	ND	49.0		
PCB-44	677000	-			PCB-94	7920	-		
PCB-45	23000	-			PCB-95	2660000	-		
PCB-46	10900	-			PCB-96	14400	-		
PCB-47	48900	-			PCB-97	764000	-		
PCB-48	32500	-	C	75	PCB-98	ND	42.3	C	102
PCB-49	-	-	C043	43	PCB-99	953000	-		
PCB-50	194	-			PCB-100	3700	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-004-SA
Client ID: SM20131106-B-2B
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: 11-07-2013
Amount: 0.93 g
% Solids: 93.44

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	330000	-		
PCB-102	-	-	C098	98	PCB-152	2490	-		
PCB-103	9390	-			PCB-153	1460000	-		
PCB-104	ND	26.7			PCB-154	12100	-		
PCB-105	735000	-			PCB-155	ND	44.6		
PCB-106	2100000	-	C	118	PCB-156	99100	-		
PCB-107	129000	-	C	108	PCB-157	22000	-		
PCB-108	-	-	C107	107	PCB-158	208000	-	C	160
PCB-109	161	-			PCB-159	9130	-		
PCB-110	2310000	-			PCB-160	-	-	C158	158
PCB-111	48300	-	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	2190	-			PCB-163	-	-	C138	138/164
PCB-114	48600	-			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	6660	-		
PCB-117	-	-	C087	87/125	PCB-167	49000	-		
PCB-118	-	-	C106	106	PCB-168	1950	-		
PCB-119	25800	-			PCB-169	123	-		
PCB-120	3880	-			PCB-170	183000	-		
PCB-121	ND	38.0			PCB-171	76000	-		
PCB-122	21800	-			PCB-172	33900	-		
PCB-123	26600	-			PCB-173	7510	-		
PCB-124	102000	-			PCB-174	295000	-		
PCB-125	-	-	C087	87/117	PCB-175	12200	-		
PCB-126	11400	-			PCB-176	42200	-		
PCB-127	2900	-			PCB-177	173000	-		
PCB-128	237000	-	C	162	PCB-178	48000	-		
PCB-129	86300	-			PCB-179	119000	-		
PCB-130	108000	-			PCB-180	424000	-		
PCB-131	51700	-	C	133	PCB-181	2880	-		
PCB-132	634000	-	C	161	PCB-182	290000	-	C	187
PCB-133	-	-	C131	131	PCB-183	148000	-		
PCB-134	116000	-	C	143	PCB-184	330	-		
PCB-135	237000	-			PCB-185	37600	-		
PCB-136	329000	-			PCB-186	140	-		
PCB-137	115000	-			PCB-187	-	-	C182	182
PCB-138	1400000	-	C	163/164	PCB-188	171	-		
PCB-139	1470000	-	C	149	PCB-189	2070	-		
PCB-140	7460	-			PCB-190	38400	-		
PCB-141	357000	-			PCB-191	7750	-		
PCB-142	485	-			PCB-192	81.7	-		
PCB-143	-	-	C134	134	PCB-193	19800	-		
PCB-144	89200	-			PCB-194	25000	-		
PCB-145	1050	-			PCB-195	23000	-		
PCB-146	186000	-	C	165	PCB-196	67400	-	C	203
PCB-147	37200	-			PCB-197	3850	-		
PCB-148	ND	87.3			PCB-198	3570	-		
PCB-149	-	-	C139	139	PCB-199	65800	-		
PCB-150	2170	-			PCB-200	13000	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-004-SA
Client ID: SM20131106-B-2B
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: 11-07-2013
Amount: 0.93 g
% Solids: 93.44

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013

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Compound	Conc	DL	Qual	Coeluters
PCB-201	12700	-		
PCB-202	11800	-		
PCB-203	-	-	C196	196
PCB-204	ND	29.0		
PCB-205	971	-		
PCB-206	3320	-		
PCB-207	1820	-		
PCB-208	1550	-		
PCB-209	1310	-		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	86.8	5.00 - 145	
13C-PCB-3	86.2	5.00 - 145	
13C-PCB-4	83.5	5.00 - 145	
13C-PCB-15	92.6	5.00 - 145	
13C-PCB-19	77.6	5.00 - 145	
13C-PCB-37	79.7	5.00 - 145	
13C-PCB-54	89.8	5.00 - 145	
13C-PCB-77	98.4	10.0 - 145	
13C-PCB-81	101	10.0 - 145	
13C-PCB-104	90.1	10.0 - 145	
13C-PCB-105	92.8	10.0 - 145	
13C-PCB-114	89.3	10.0 - 145	
13C-PCB-118	93.9	10.0 - 145	
13C-PCB-123	87.2	10.0 - 145	
13C-PCB-126	86.9	10.0 - 145	
13C-PCB-155	83.3	10.0 - 145	
13C-PCB-156	96.1	10.0 - 145	
13C-PCB-157	95.3	10.0 - 145	
13C-PCB-167	96.6	10.0 - 145	
13C-PCB-169	99.2	10.0 - 145	
13C-PCB-188	87.3	10.0 - 145	
13C-PCB-189	98.4	10.0 - 145	
13C-PCB-202	82.6	10.0 - 145	
13C-PCB-205	92.9	10.0 - 145	
13C-PCB-206	83.1	10.0 - 145	
13C-PCB-208	89.8	10.0 - 145	
13C-PCB-209	77.7	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	77.4	5.00 - 145	
13C-PCB-111	85.6	10.0 - 145	
13C-PCB-178	86.0	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

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EPA Modified Method 1668 PCBs



FAL ID: 8162-005-SA
Client ID: SM20131106-B-3A
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: 11-07-2013
Amount: 0.50 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013
Total Conc: 6330000

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	636	-			PCB-51	856	-		
PCB-2	198	-			PCB-52	37700	-	C	69
PCB-3	750	-			PCB-53	2710	-		
PCB-4	808	-			PCB-54	27.1	-	J	
PCB-5	249	-			PCB-55	1090	-		
PCB-6	825	-			PCB-56	31600	-	C	60
PCB-7	278	-			PCB-57	78.1	-	J	
PCB-8	4010	-			PCB-58	75.9	-	J	
PCB-9	294	-			PCB-59	-	-	C042	42
PCB-10	46.0	-	J		PCB-60	-	-	C056	56
PCB-11	5530	-	B		PCB-61	66400	-	C	70
PCB-12	203	-			PCB-62	ND	14.0		
PCB-13	273	-			PCB-63	1280	-		
PCB-14	ND	9.46			PCB-64	-	-	C041	41/71/72
PCB-15	1280	-			PCB-65	ND	13.0		
PCB-16	3580	-			PCB-66	35200	-	C	76
PCB-17	3840	-			PCB-67	855	-		
PCB-18	11600	-			PCB-68	236	-		
PCB-19	469	-			PCB-69	-	-	C052	52
PCB-20	13400	-	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	6990	-			PCB-72	-	-	C041	41/64/71
PCB-23	22.6	-	J		PCB-73	193	-		
PCB-24	96.6	-			PCB-74	14200	-		
PCB-25	1060	-			PCB-75	-	-	C048	48
PCB-26	2620	-			PCB-76	-	-	C066	66
PCB-27	616	-			PCB-77	5370	-		
PCB-28	14600	-			PCB-78	435	-		
PCB-29	126	-			PCB-79	1150	-		
PCB-30	ND	5.92			PCB-80	ND	10.4		
PCB-31	19000	-			PCB-81	3110	-		
PCB-32	2670	-			PCB-82	19100	-		
PCB-33	-	-	C020	20/21	PCB-83	6390	-	C	112
PCB-34	62.6	-	J		PCB-84	74100	-	C	92
PCB-35	520	-			PCB-85	21100	-	C	116
PCB-36	101	-			PCB-86	478	-		
PCB-37	3990	-			PCB-87	73900	-	C	117/125
PCB-38	243	-			PCB-88	17200	-	C	91
PCB-39	ND	9.92			PCB-89	1140	-		
PCB-40	4570	-			PCB-90	266000	-	C	101
PCB-41	22300	-	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	6550	-	C	59	PCB-92	-	-	C084	84
PCB-43	15300	-	C	49	PCB-93	ND	19.1		
PCB-44	23800	-			PCB-94	620	-		
PCB-45	2480	-			PCB-95	148000	-		
PCB-46	1050	-			PCB-96	638	-		
PCB-47	5190	-			PCB-97	51400	-		
PCB-48	4520	-	C	75	PCB-98	ND	16.5	C	102
PCB-49	-	-	C043	43	PCB-99	54700	-		
PCB-50	41.5	-	J		PCB-100	284	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-005-SA
Client ID: SM20131106-B-3A
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: 11-07-2013
Amount: 0.50 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	203000	-		
PCB-102	-	-	C098	98	PCB-152	270	-		
PCB-103	568	-			PCB-153	580000	-		
PCB-104	ND	10.4			PCB-154	1470	-		
PCB-105	59500	-			PCB-155	157	-		
PCB-106	184000	-	C	118	PCB-156	27300	-		
PCB-107	10700	-	C	108	PCB-157	2150	-		
PCB-108	-	-	C107	107	PCB-158	56600	-	C	160
PCB-109	60.8	-	J		PCB-159	8640	-		
PCB-110	168000	-			PCB-160	-	-	C158	158
PCB-111	3030	-	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	211	-			PCB-163	-	-	C138	138/164
PCB-114	4810	-			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	520	-		
PCB-117	-	-	C087	87/125	PCB-167	10800	-		
PCB-118	-	-	C106	106	PCB-168	540	-		
PCB-119	1910	-			PCB-169	ND	21.5		
PCB-120	799	-			PCB-170	139000	-		
PCB-121	ND	14.8			PCB-171	64500	-		
PCB-122	2260	-			PCB-172	25700	-		
PCB-123	2370	-			PCB-173	6930	-		
PCB-124	10200	-			PCB-174	288000	-		
PCB-125	-	-	C087	87/117	PCB-175	12900	-		
PCB-126	1180	-			PCB-176	53900	-		
PCB-127	112	-			PCB-177	167000	-		
PCB-128	39300	-	C	162	PCB-178	61100	-		
PCB-129	13800	-			PCB-179	170000	-		
PCB-130	21000	-			PCB-180	326000	-		
PCB-131	10500	-	C	133	PCB-181	1320	-		
PCB-132	141000	-	C	161	PCB-182	313000	-	C	187
PCB-133	-	-	C131	131	PCB-183	148000	-		
PCB-134	29300	-	C	143	PCB-184	269	-		
PCB-135	82300	-			PCB-185	36800	-		
PCB-136	85000	-			PCB-186	ND	20.9		
PCB-137	9000	-			PCB-187	-	-	C182	182
PCB-138	460000	-	C	163/164	PCB-188	120	-		
PCB-139	576000	-	C	149	PCB-189	1830	-		
PCB-140	882	-			PCB-190	29600	-		
PCB-141	181000	-			PCB-191	5890	-		
PCB-142	102	-			PCB-192	ND	23.8		
PCB-143	-	-	C134	134	PCB-193	15800	-		
PCB-144	33500	-			PCB-194	32200	-		
PCB-145	112	-			PCB-195	27400	-		
PCB-146	68000	-	C	165	PCB-196	59200	-	C	203
PCB-147	3100	-			PCB-197	4510	-		
PCB-148	ND	22.2			PCB-198	4300	-		
PCB-149	-	-	C139	139	PCB-199	57400	-		
PCB-150	309	-			PCB-200	14800	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-005-SA
Client ID: SM20131106-B-3A
Matrix: Solid
Batch No: X2970

Date Extracted: 11-12-2013
Date Received: 11-07-2013
Amount: 0.50 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13
GC Column: DB1
Units: pg/g

Acquired: 11-15-2013

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Compound	Conc	DL	Qual	Coeluters
PCB-201	16100	-		
PCB-202	16500	-		
PCB-203	-	-	C196	196
PCB-204	ND	10.2		
PCB-205	1220	-		
PCB-206	3850	-		
PCB-207	1450	-		
PCB-208	1440	-		
PCB-209	263	-		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	85.1	5.00 - 145	
13C-PCB-3	86.1	5.00 - 145	
13C-PCB-4	85.6	5.00 - 145	
13C-PCB-15	94.8	5.00 - 145	
13C-PCB-19	76.6	5.00 - 145	
13C-PCB-37	85.3	5.00 - 145	
13C-PCB-54	101	5.00 - 145	
13C-PCB-77	94.3	10.0 - 145	
13C-PCB-81	93.9	10.0 - 145	
13C-PCB-104	96.9	10.0 - 145	
13C-PCB-105	81.9	10.0 - 145	
13C-PCB-114	94.9	10.0 - 145	
13C-PCB-118	89.4	10.0 - 145	
13C-PCB-123	94.6	10.0 - 145	
13C-PCB-126	91.2	10.0 - 145	
13C-PCB-155	85.3	10.0 - 145	
13C-PCB-156	107	10.0 - 145	
13C-PCB-157	101	10.0 - 145	
13C-PCB-167	103	10.0 - 145	
13C-PCB-169	107	10.0 - 145	
13C-PCB-188	90.9	10.0 - 145	
13C-PCB-189	105	10.0 - 145	
13C-PCB-202	93.2	10.0 - 145	
13C-PCB-205	90.8	10.0 - 145	
13C-PCB-206	91.3	10.0 - 145	
13C-PCB-208	94.7	10.0 - 145	
13C-PCB-209	83.3	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	85.9	5.00 - 145	
13C-PCB-111	86.1	10.0 - 145	
13C-PCB-178	99.7	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

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EPA Modified Method 1668 PCBs



FAL ID: 8162-006-SA
Client ID: SM20131106-B-3B
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.96 g
% Solids: 96.15

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013
Total Conc: 7270000

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	679	-			PCB-51	2410	-		
PCB-2	266	-			PCB-52	86000	-	C	69
PCB-3	1150	-			PCB-53	7860	-		
PCB-4	1300	-			PCB-54	102	-		
PCB-5	350	-			PCB-55	1950	-		
PCB-6	1180	-			PCB-56	47800	-	C	60
PCB-7	331	-			PCB-57	275	-		
PCB-8	6560	-			PCB-58	102	-		
PCB-9	358	-			PCB-59	-	-	C042	42
PCB-10	82.5	-			PCB-60	-	-	C056	56
PCB-11	9370	-			PCB-61	122000	-	C	70
PCB-12	330	-			PCB-62	ND	8.41		
PCB-13	599	-			PCB-63	2320	-		
PCB-14	ND	5.95			PCB-64	-	-	C041	41/71/72
PCB-15	3330	-			PCB-65	ND	7.43		
PCB-16	8300	-			PCB-66	64400	-	C	76
PCB-17	7820	-			PCB-67	1600	-		
PCB-18	25900	-			PCB-68	550	-		
PCB-19	1610	-			PCB-69	-	-	C052	52
PCB-20	23900	-	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	15400	-			PCB-72	-	-	C041	41/64/71
PCB-23	31.3	-	J		PCB-73	226	-		
PCB-24	187	-			PCB-74	25400	-		
PCB-25	1750	-			PCB-75	-	-	C048	48
PCB-26	4780	-			PCB-76	-	-	C066	66
PCB-27	1510	-			PCB-77	8830	-		
PCB-28	27600	-			PCB-78	384	-		
PCB-29	157	-			PCB-79	1110	-		
PCB-30	ND	2.35			PCB-80	ND	6.19		
PCB-31	32200	-			PCB-81	3380	-		
PCB-32	8010	-			PCB-82	23900	-		
PCB-33	-	-	C020	20/21	PCB-83	6560	-	C	112
PCB-34	80.3	-			PCB-84	82700	-	C	92
PCB-35	961	-			PCB-85	23800	-	C	116
PCB-36	151	-			PCB-86	545	-		
PCB-37	11100	-			PCB-87	85400	-	C	117/125
PCB-38	256	-			PCB-88	21800	-	C	91
PCB-39	33.0	-	J		PCB-89	1730	-		
PCB-40	12900	-			PCB-90	263000	-	C	101
PCB-41	52100	-	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	15800	-	C	59	PCB-92	-	-	C084	84
PCB-43	34500	-	C	49	PCB-93	ND	16.4		
PCB-44	57700	-			PCB-94	690	-		
PCB-45	8560	-			PCB-95	179000	-		
PCB-46	4060	-			PCB-96	1170	-		
PCB-47	11500	-			PCB-97	52400	-		
PCB-48	9130	-	C	75	PCB-98	ND	13.5	C	102
PCB-49	-	-	C043	43	PCB-99	58700	-		
PCB-50	99.3	-			PCB-100	269	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-006-SA
Client ID: SM20131106-B-3B
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.96 g
% Solids: 96.15

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	196000	-		
PCB-102	-	-	C098	98	PCB-152	199	-		
PCB-103	625	-			PCB-153	673000	-		
PCB-104	ND	8.16			PCB-154	1030	-		
PCB-105	77400	-			PCB-155	107	-		
PCB-106	208000	-	C	118	PCB-156	31400	-		
PCB-107	11200	-	C	108	PCB-157	3530	-		
PCB-108	-	-	C107	107	PCB-158	70500	-	C	160
PCB-109	67.2	-			PCB-159	8690	-		
PCB-110	190000	-			PCB-160	-	-	C158	158
PCB-111	3690	-	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	155	-			PCB-163	-	-	C138	138/164
PCB-114	5650	-			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	991	-		
PCB-117	-	-	C087	87/125	PCB-167	13000	-		
PCB-118	-	-	C106	106	PCB-168	712	-		
PCB-119	1800	-			PCB-169	36.1	-	J	
PCB-120	830	-			PCB-170	129000	-		
PCB-121	ND	12.4			PCB-171	71300	-		
PCB-122	2300	-			PCB-172	29000	-		
PCB-123	2410	-			PCB-173	6590	-		
PCB-124	9900	-			PCB-174	293000	-		
PCB-125	-	-	C087	87/117	PCB-175	13100	-		
PCB-126	1080	-			PCB-176	48200	-		
PCB-127	146	-			PCB-177	179000	-		
PCB-128	50900	-	C	162	PCB-178	58500	-		
PCB-129	16800	-			PCB-179	149000	-		
PCB-130	26500	-			PCB-180	354000	-		
PCB-131	12600	-	C	133	PCB-181	1530	-		
PCB-132	207000	-	C	161	PCB-182	326000	-	C	187
PCB-133	-	-	C131	131	PCB-183	161000	-		
PCB-134	29400	-	C	143	PCB-184	313	-		
PCB-135	92100	-			PCB-185	35100	-		
PCB-136	86000	-			PCB-186	ND	12.7		
PCB-137	10400	-			PCB-187	-	-	C182	182
PCB-138	563000	-	C	163/164	PCB-188	79.9	-		
PCB-139	634000	-	C	149	PCB-189	1300	-		
PCB-140	949	-			PCB-190	28300	-		
PCB-141	214000	-			PCB-191	6260	-		
PCB-142	20.2	-	J		PCB-192	ND	14.2		
PCB-143	-	-	C134	134	PCB-193	16800	-		
PCB-144	38000	-			PCB-194	22500	-		
PCB-145	85.7	-			PCB-195	21100	-		
PCB-146	78500	-	C	165	PCB-196	50900	-	C	203
PCB-147	3590	-			PCB-197	3830	-		
PCB-148	22.1	-	J		PCB-198	2790	-		
PCB-149	-	-	C139	139	PCB-199	52000	-		
PCB-150	222	-			PCB-200	12300	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-006-SA
Client ID: SM20131106-B-3B
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.96 g
% Solids: 96.15

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters
PCB-201	13500	-		
PCB-202	13300	-		
PCB-203	-	-	C196	196
PCB-204	25.6	-	J	
PCB-205	773	-		
PCB-206	2680	-		
PCB-207	1430	-		
PCB-208	1530	-		
PCB-209	1280	-		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	81.9	5.00 - 145	
13C-PCB-3	80.6	5.00 - 145	
13C-PCB-4	82.3	5.00 - 145	
13C-PCB-15	89.4	5.00 - 145	
13C-PCB-19	81.3	5.00 - 145	
13C-PCB-37	89.6	5.00 - 145	
13C-PCB-54	80.8	5.00 - 145	
13C-PCB-77	88.4	10.0 - 145	
13C-PCB-81	95.5	10.0 - 145	
13C-PCB-104	82.6	10.0 - 145	
13C-PCB-105	95.3	10.0 - 145	
13C-PCB-114	96.4	10.0 - 145	
13C-PCB-118	92.8	10.0 - 145	
13C-PCB-123	99.4	10.0 - 145	
13C-PCB-126	86.5	10.0 - 145	
13C-PCB-155	80.2	10.0 - 145	
13C-PCB-156	93.5	10.0 - 145	
13C-PCB-157	88.4	10.0 - 145	
13C-PCB-167	90.1	10.0 - 145	
13C-PCB-169	84.1	10.0 - 145	
13C-PCB-188	82.2	10.0 - 145	
13C-PCB-189	70.6	10.0 - 145	
13C-PCB-202	84.8	10.0 - 145	
13C-PCB-205	80.6	10.0 - 145	
13C-PCB-206	79.0	10.0 - 145	
13C-PCB-208	78.0	10.0 - 145	
13C-PCB-209	82.8	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	78.2	5.00 - 145	
13C-PCB-111	76.9	10.0 - 145	
13C-PCB-178	76.0	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

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EPA Modified Method 1668 PCBs



FAL ID: 8162-007-SA
Client ID: SM20131106-B-4A
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.23 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013
Total Conc: 98700000

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	92.2	-	J		PCB-51	649	-		
PCB-2	45.4	-	J		PCB-52	233000	-	C	69
PCB-3	90.2	-	J		PCB-53	2920	-		
PCB-4	166	-	J		PCB-54	ND	9.97		
PCB-5	71.6	-	J		PCB-55	19500	-		
PCB-6	171	-	J		PCB-56	239000	-	C	60
PCB-7	39.0	-	J		PCB-57	800	-		
PCB-8	877	-			PCB-58	368	-		
PCB-9	73.3	-	J		PCB-59	-	-	C042	42
PCB-10	ND	21.8			PCB-60	-	-	C056	56
PCB-11	3430	-			PCB-61	1310000	-	C	70
PCB-12	75.3	-	J		PCB-62	ND	15.5		
PCB-13	99.2	-	J		PCB-63	9740	-		
PCB-14	ND	20.7			PCB-64	-	-	C041	41/71/72
PCB-15	350	-			PCB-65	ND	13.7		
PCB-16	797	-			PCB-66	415000	-	C	76
PCB-17	1050	-			PCB-67	4720	-		
PCB-18	3190	-			PCB-68	560	-		
PCB-19	129	-	J		PCB-69	-	-	C052	52
PCB-20	4570	-	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	2670	-			PCB-72	-	-	C041	41/64/71
PCB-23	ND	22.1			PCB-73	261	-		
PCB-24	70.6	-	J		PCB-74	157000	-		
PCB-25	334	-			PCB-75	-	-	C048	48
PCB-26	915	-			PCB-76	-	-	C066	66
PCB-27	169	-	J		PCB-77	127000	-		
PCB-28	4710	-			PCB-78	16200	-		
PCB-29	61.1	-	J		PCB-79	39700	-		
PCB-30	ND	9.15			PCB-80	ND	11.4		
PCB-31	5540	-			PCB-81	128000	-		
PCB-32	1070	-			PCB-82	1170000	-		
PCB-33	-	-	C020	20/21	PCB-83	295000	-	C	112
PCB-34	ND	21.0			PCB-84	2130000	-	C	92
PCB-35	781	-			PCB-85	1100000	-	C	116
PCB-36	ND	21.2			PCB-86	12400	-		
PCB-37	4800	-			PCB-87	3520000	-	C	117/125
PCB-38	253	-			PCB-88	428000	-	C	91
PCB-39	ND	22.4			PCB-89	28000	-		
PCB-40	19200	-			PCB-90	6490000	-	C	101
PCB-41	104000	-	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	15900	-	C	59	PCB-92	-	-	C084	84
PCB-43	54900	-	C	49	PCB-93	ND	28.1		
PCB-44	152000	-			PCB-94	7890	-		
PCB-45	2040	-			PCB-95	2450000	-		
PCB-46	1250	-			PCB-96	4640	-		
PCB-47	8380	-			PCB-97	2390000	-		
PCB-48	5860	-	C	75	PCB-98	ND	23.2	C	102
PCB-49	-	-	C043	43	PCB-99	2420000	-		
PCB-50	ND	17.5			PCB-100	2840	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-007-SA
Client ID: SM20131106-B-4A
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.23 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	1360000	-		
PCB-102	-	-	C098	98	PCB-152	7400	-		
PCB-103	6450	-			PCB-153	7300000	-		
PCB-104	ND	14.0			PCB-154	64200	-		
PCB-105	4500000	-			PCB-155	146	-	J	
PCB-106	11200000	-	C	118	PCB-156	707000	-		
PCB-107	694000	-	C	108	PCB-157	198000	-		
PCB-108	-	-	C107	107	PCB-158	1510000	-	C	160
PCB-109	1210	-			PCB-159	18800	-		
PCB-110	7450000	-			PCB-160	-	-	C158	158
PCB-111	175000	-	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	3770	-			PCB-163	-	-	C138	138/164
PCB-114	296000	-			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	64500	-		
PCB-117	-	-	C087	87/125	PCB-167	399000	-		
PCB-118	-	-	C106	106	PCB-168	15200	-		
PCB-119	82800	-			PCB-169	695	-		
PCB-120	10500	-			PCB-170	486000	-		
PCB-121	ND	21.2			PCB-171	257000	-		
PCB-122	133000	-			PCB-172	90500	-		
PCB-123	151000	-			PCB-173	29400	-		
PCB-124	487000	-			PCB-174	715000	-		
PCB-125	-	-	C087	87/117	PCB-175	42900	-		
PCB-126	90600	-			PCB-176	162000	-		
PCB-127	12000	-			PCB-177	472000	-		
PCB-128	1900000	-	C	162	PCB-178	146000	-		
PCB-129	714000	-			PCB-179	412000	-		
PCB-130	766000	-			PCB-180	880000	-		
PCB-131	333000	-	C	133	PCB-181	25900	-		
PCB-132	3760000	-	C	161	PCB-182	721000	-	C	187
PCB-133	-	-	C131	131	PCB-183	471000	-		
PCB-134	732000	-	C	143	PCB-184	1870	-		
PCB-135	1260000	-			PCB-185	78400	-		
PCB-136	1080000	-			PCB-186	1060	-		
PCB-137	996000	-			PCB-187	-	-	C182	182
PCB-138	8700000	-	C	163/164	PCB-188	1090	-		
PCB-139	6800000	-	C	149	PCB-189	6640	-		
PCB-140	46300	-			PCB-190	90600	-		
PCB-141	1970000	-			PCB-191	21500	-		
PCB-142	2760	-			PCB-192	ND	73.9		
PCB-143	-	-	C134	134	PCB-193	37400	-		
PCB-144	376000	-			PCB-194	30900	-		
PCB-145	3610	-			PCB-195	24600	-		
PCB-146	1110000	-	C	165	PCB-196	74200	-	C	203
PCB-147	254000	-			PCB-197	6140	-		
PCB-148	458	-			PCB-198	4060	-		
PCB-149	-	-	C139	139	PCB-199	71200	-		
PCB-150	6310	-			PCB-200	17800	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-007-SA
Client ID: SM20131106-B-4A
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.23 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters
PCB-201	20400	-		
PCB-202	21100	-		
PCB-203	-	-	C196	196
PCB-204	85.4	-	J	
PCB-205	1240	-		
PCB-206	3730	-		
PCB-207	1620	-		
PCB-208	1760	-		
PCB-209	450	-		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	82.8	5.00 - 145	
13C-PCB-3	84.1	5.00 - 145	
13C-PCB-4	88.2	5.00 - 145	
13C-PCB-15	94.9	5.00 - 145	
13C-PCB-19	87.6	5.00 - 145	
13C-PCB-37	90.2	5.00 - 145	
13C-PCB-54	82.3	5.00 - 145	
13C-PCB-77	94.5	10.0 - 145	
13C-PCB-81	101	10.0 - 145	
13C-PCB-104	85.1	10.0 - 145	
13C-PCB-105	91.6	10.0 - 145	
13C-PCB-114	93.6	10.0 - 145	
13C-PCB-118	86.3	10.0 - 145	
13C-PCB-123	100	10.0 - 145	
13C-PCB-126	95.4	10.0 - 145	
13C-PCB-155	87.4	10.0 - 145	
13C-PCB-156	100	10.0 - 145	
13C-PCB-157	97.7	10.0 - 145	
13C-PCB-167	96.5	10.0 - 145	
13C-PCB-169	99.0	10.0 - 145	
13C-PCB-188	83.2	10.0 - 145	
13C-PCB-189	98.2	10.0 - 145	
13C-PCB-202	86.0	10.0 - 145	
13C-PCB-205	90.3	10.0 - 145	
13C-PCB-206	86.8	10.0 - 145	
13C-PCB-208	85.3	10.0 - 145	
13C-PCB-209	77.2	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	85.7	5.00 - 145	
13C-PCB-111	95.6	10.0 - 145	
13C-PCB-178	90.5	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

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EPA Modified Method 1668 PCBs



FAL ID: 8162-008-SA
Client ID: SM20131106-B-4B
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.95 g
% Solids: 94.64

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013
Total Conc: 16000000

Page 1 of 3

Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	78.6	-			PCB-51	2640	-		
PCB-2	26.6	-	J		PCB-52	378000	-	C	69
PCB-3	82.0	-			PCB-53	13800	-		
PCB-4	454	-			PCB-54	91.0	-		
PCB-5	88.4	-			PCB-55	6580	-		
PCB-6	273	-			PCB-56	82000	-	C	60
PCB-7	41.5	-	J		PCB-57	395	-		
PCB-8	1560	-			PCB-58	140	-		
PCB-9	88.5	-			PCB-59	-	-	C042	42
PCB-10	26.0	-	J		PCB-60	-	-	C056	56
PCB-11	2630	-			PCB-61	476000	-	C	70
PCB-12	74.8	-			PCB-62	ND	9.80		
PCB-13	145	-			PCB-63	4140	-		
PCB-14	ND	4.28			PCB-64	-	-	C041	41/71/72
PCB-15	1080	-			PCB-65	ND	8.66		
PCB-16	5660	-			PCB-66	165000	-	C	76
PCB-17	4030	-			PCB-67	1710	-		
PCB-18	14300	-			PCB-68	698	-		
PCB-19	1110	-			PCB-69	-	-	C052	52
PCB-20	16500	-	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	11200	-			PCB-72	-	-	C041	41/64/71
PCB-23	22.8	-	J		PCB-73	237	-		
PCB-24	158	-			PCB-74	68100	-		
PCB-25	952	-			PCB-75	-	-	C048	48
PCB-26	2620	-			PCB-76	-	-	C066	66
PCB-27	867	-			PCB-77	28200	-		
PCB-28	13000	-			PCB-78	2090	-		
PCB-29	81.7	-			PCB-79	5420	-		
PCB-30	ND	2.75			PCB-80	ND	7.21		
PCB-31	18400	-			PCB-81	19300	-		
PCB-32	4680	-			PCB-82	163000	-		
PCB-33	-	-	C020	20/21	PCB-83	41800	-	C	112
PCB-34	44.1	-			PCB-84	437000	-	C	92
PCB-35	744	-			PCB-85	161000	-	C	116
PCB-36	21.6	-	J		PCB-86	2020	-		
PCB-37	9220	-			PCB-87	546000	-	C	117/125
PCB-38	351	-			PCB-88	132000	-	C	91
PCB-39	ND	6.26			PCB-89	5600	-		
PCB-40	23100	-			PCB-90	1080000	-	C	101
PCB-41	116000	-	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	23300	-	C	59	PCB-92	-	-	C084	84
PCB-43	94100	-	C	49	PCB-93	ND	16.0		
PCB-44	203000	-			PCB-94	2820	-		
PCB-45	9300	-			PCB-95	842000	-		
PCB-46	4820	-			PCB-96	4520	-		
PCB-47	17500	-			PCB-97	344000	-		
PCB-48	10800	-	C	75	PCB-98	ND	13.2	C	102
PCB-49	-	-	C043	43	PCB-99	384000	-		
PCB-50	77.1	-			PCB-100	1180	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-008-SA
Client ID: SM20131106-B-4B
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.95 g
% Solids: 94.64

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	185000	-		
PCB-102	-	-	C098	98	PCB-152	1100	-		
PCB-103	2820	-			PCB-153	957000	-		
PCB-104	ND	7.97			PCB-154	5910	-		
PCB-105	540000	-			PCB-155	32.3	-	J	
PCB-106	1270000	-	C	118	PCB-156	91900	-		
PCB-107	73300	-	C	108	PCB-157	22000	-		
PCB-108	-	-	C107	107	PCB-158	165000	-	C	160
PCB-109	147	-			PCB-159	4950	-		
PCB-110	1130000	-			PCB-160	-	-	C158	158
PCB-111	20900	-	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	401	-			PCB-163	-	-	C138	138/164
PCB-114	32600	-			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	5580	-		
PCB-117	-	-	C087	87/125	PCB-167	49100	-		
PCB-118	-	-	C106	106	PCB-168	1050	-		
PCB-119	9590	-			PCB-169	147	-		
PCB-120	1940	-			PCB-170	130000	-		
PCB-121	ND	12.1			PCB-171	54400	-		
PCB-122	14400	-			PCB-172	23500	-		
PCB-123	16900	-			PCB-173	5450	-		
PCB-124	57500	-			PCB-174	192000	-		
PCB-125	-	-	C087	87/117	PCB-175	8090	-		
PCB-126	11800	-			PCB-176	28300	-		
PCB-127	897	-			PCB-177	118000	-		
PCB-128	221000	-	C	162	PCB-178	31900	-		
PCB-129	72600	-			PCB-179	81400	-		
PCB-130	79300	-			PCB-180	292000	-		
PCB-131	31700	-	C	133	PCB-181	3080	-		
PCB-132	488000	-	C	161	PCB-182	191000	-	C	187
PCB-133	-	-	C131	131	PCB-183	104000	-		
PCB-134	68800	-	C	143	PCB-184	219	-		
PCB-135	145000	-			PCB-185	24500	-		
PCB-136	183000	-			PCB-186	84.3	-		
PCB-137	90200	-			PCB-187	-	-	C182	182
PCB-138	1130000	-	C	163/164	PCB-188	114	-		
PCB-139	895000	-	C	149	PCB-189	1730	-		
PCB-140	4390	-			PCB-190	26000	-		
PCB-141	259000	-			PCB-191	5420	-		
PCB-142	198	-			PCB-192	37.8	-	J	
PCB-143	-	-	C134	134	PCB-193	12900	-		
PCB-144	47800	-			PCB-194	20700	-		
PCB-145	480	-			PCB-195	15900	-		
PCB-146	125000	-	C	165	PCB-196	45600	-	C	203
PCB-147	22100	-			PCB-197	2410	-		
PCB-148	120	-			PCB-198	2350	-		
PCB-149	-	-	C139	139	PCB-199	44700	-		
PCB-150	915	-			PCB-200	8120	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-008-SA
Client ID: SM20131106-B-4B
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.95 g
% Solids: 94.64

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters
PCB-201	8010	-		
PCB-202	7870	-		
PCB-203	-	-	C196	196
PCB-204	33.6	-	J	
PCB-205	709	-		
PCB-206	2890	-		
PCB-207	1350	-		
PCB-208	1330	-		
PCB-209	3190	-		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	85.0	5.00 - 145	
13C-PCB-3	83.2	5.00 - 145	
13C-PCB-4	87.3	5.00 - 145	
13C-PCB-15	91.0	5.00 - 145	
13C-PCB-19	82.7	5.00 - 145	
13C-PCB-37	87.2	5.00 - 145	
13C-PCB-54	80.7	5.00 - 145	
13C-PCB-77	92.0	10.0 - 145	
13C-PCB-81	100	10.0 - 145	
13C-PCB-104	84.3	10.0 - 145	
13C-PCB-105	94.0	10.0 - 145	
13C-PCB-114	85.7	10.0 - 145	
13C-PCB-118	94.8	10.0 - 145	
13C-PCB-123	89.8	10.0 - 145	
13C-PCB-126	88.9	10.0 - 145	
13C-PCB-155	81.4	10.0 - 145	
13C-PCB-156	97.1	10.0 - 145	
13C-PCB-157	94.4	10.0 - 145	
13C-PCB-167	91.9	10.0 - 145	
13C-PCB-169	101	10.0 - 145	
13C-PCB-188	80.4	10.0 - 145	
13C-PCB-189	95.1	10.0 - 145	
13C-PCB-202	84.9	10.0 - 145	
13C-PCB-205	80.6	10.0 - 145	
13C-PCB-206	80.9	10.0 - 145	
13C-PCB-208	78.2	10.0 - 145	
13C-PCB-209	76.0	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	86.7	5.00 - 145	
13C-PCB-111	93.2	10.0 - 145	
13C-PCB-178	83.1	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

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EPA Modified Method 1668 PCBs



FAL ID: 8162-009-SA
Client ID: SM20131106-B-5A
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.19 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013
Total Conc: 52800000

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	109	-	J		PCB-51	875	-		
PCB-2	ND	21.9			PCB-52	200000	-	C	69
PCB-3	113	-	J		PCB-53	3910	-		
PCB-4	288	-			PCB-54	ND	18.2		
PCB-5	113	-	J		PCB-55	11300	-		
PCB-6	251	-			PCB-56	161000	-	C	60
PCB-7	69.1	-	J		PCB-57	554	-		
PCB-8	1300	-			PCB-58	166	-	J	
PCB-9	127	-	J		PCB-59	-	-	C042	42
PCB-10	ND	25.3			PCB-60	-	-	C056	56
PCB-11	4850	-			PCB-61	920000	-	C	70
PCB-12	105	-	J		PCB-62	ND	28.3		
PCB-13	131	-	J		PCB-63	7280	-		
PCB-14	ND	24.1			PCB-64	-	-	C041	41/71/72
PCB-15	554	-			PCB-65	ND	25.0		
PCB-16	1380	-			PCB-66	290000	-	C	76
PCB-17	1520	-			PCB-67	3320	-		
PCB-18	4370	-			PCB-68	582	-		
PCB-19	206	-	J		PCB-69	-	-	C052	52
PCB-20	7070	-	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	4440	-			PCB-72	-	-	C041	41/64/71
PCB-23	ND	39.0			PCB-73	243	-		
PCB-24	77.4	-	J		PCB-74	110000	-		
PCB-25	513	-			PCB-75	-	-	C048	48
PCB-26	1340	-			PCB-76	-	-	C066	66
PCB-27	281	-			PCB-77	223000	-		
PCB-28	7220	-			PCB-78	9970	-		
PCB-29	74.5	-	J		PCB-79	31900	-		
PCB-30	ND	11.3			PCB-80	ND	20.8		
PCB-31	8600	-			PCB-81	76800	-		
PCB-32	1430	-			PCB-82	657000	-		
PCB-33	-	-	C020	20/21	PCB-83	177000	-	C	112
PCB-34	ND	37.0			PCB-84	1320000	-	C	92
PCB-35	844	-			PCB-85	659000	-	C	116
PCB-36	60.2	-	J		PCB-86	12500	-		
PCB-37	6310	-			PCB-87	2100000	-	C	117/125
PCB-38	263	-			PCB-88	288000	-	C	91
PCB-39	ND	39.4			PCB-89	16700	-		
PCB-40	16900	-			PCB-90	3870000	-	C	101
PCB-41	83500	-	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	14100	-	C	59	PCB-92	-	-	C084	84
PCB-43	50500	-	C	49	PCB-93	ND	60.1		
PCB-44	118000	-			PCB-94	5570	-		
PCB-45	2700	-			PCB-95	1640000	-		
PCB-46	1520	-			PCB-96	3380	-		
PCB-47	8770	-			PCB-97	1440000	-		
PCB-48	6260	-	C	75	PCB-98	ND	49.6	C	102
PCB-49	-	-	C043	43	PCB-99	1540000	-		
PCB-50	ND	32.1			PCB-100	2060	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-009-SA
Client ID: SM20131106-B-5A
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.19 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	740000	-		
PCB-102	-	-	C098	98	PCB-152	5200	-		
PCB-103	4430	-			PCB-153	3610000	-		
PCB-104	ND	29.9			PCB-154	36700	-		
PCB-105	2170000	-			PCB-155	122	-	J	
PCB-106	5300000	-	C	118	PCB-156	364000	-		
PCB-107	354000	-	C	108	PCB-157	109000	-		
PCB-108	-	-	C107	107	PCB-158	667000	-	C	160
PCB-109	441	-			PCB-159	7020	-		
PCB-110	4470000	-			PCB-160	-	-	C158	158
PCB-111	91900	-	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	1060	-			PCB-163	-	-	C138	138/164
PCB-114	133000	-			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	24200	-		
PCB-117	-	-	C087	87/125	PCB-167	210000	-		
PCB-118	-	-	C106	106	PCB-168	7660	-		
PCB-119	45900	-			PCB-169	666	-		
PCB-120	4990	-			PCB-170	298000	-		
PCB-121	ND	45.5			PCB-171	120000	-		
PCB-122	57500	-			PCB-172	48400	-		
PCB-123	91000	-			PCB-173	13800	-		
PCB-124	247000	-			PCB-174	334000	-		
PCB-125	-	-	C087	87/117	PCB-175	19100	-		
PCB-126	75300	-			PCB-176	72900	-		
PCB-127	7240	-			PCB-177	217000	-		
PCB-128	864000	-	C	162	PCB-178	64100	-		
PCB-129	322000	-			PCB-179	197000	-		
PCB-130	401000	-			PCB-180	494000	-		
PCB-131	166000	-	C	133	PCB-181	10500	-		
PCB-132	1690000	-	C	161	PCB-182	327000	-	C	187
PCB-133	-	-	C131	131	PCB-183	212000	-		
PCB-134	362000	-	C	143	PCB-184	810	-		
PCB-135	687000	-			PCB-185	35700	-		
PCB-136	703000	-			PCB-186	467	-		
PCB-137	404000	-			PCB-187	-	-	C182	182
PCB-138	4120000	-	C	163/164	PCB-188	540	-		
PCB-139	3580000	-	C	149	PCB-189	5660	-		
PCB-140	24100	-			PCB-190	53600	-		
PCB-141	935000	-			PCB-191	12400	-		
PCB-142	1430	-			PCB-192	85.7	-	J	
PCB-143	-	-	C134	134	PCB-193	20800	-		
PCB-144	185000	-			PCB-194	24500	-		
PCB-145	2360	-			PCB-195	16300	-		
PCB-146	549000	-	C	165	PCB-196	42400	-	C	203
PCB-147	126000	-			PCB-197	2800	-		
PCB-148	438	-			PCB-198	2230	-		
PCB-149	-	-	C139	139	PCB-199	39200	-		
PCB-150	4250	-			PCB-200	8450	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-009-SA
Client ID: SM20131106-B-5A
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.19 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters
PCB-201	9240	-		
PCB-202	9350	-		
PCB-203	-	-	C196	196
PCB-204	51.6	-	J	
PCB-205	992	-		
PCB-206	2940	-		
PCB-207	934	-		
PCB-208	1040	-		
PCB-209	356	-		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	86.5	5.00 - 145	
13C-PCB-3	87.0	5.00 - 145	
13C-PCB-4	91.0	5.00 - 145	
13C-PCB-15	99.7	5.00 - 145	
13C-PCB-19	94.2	5.00 - 145	
13C-PCB-37	93.4	5.00 - 145	
13C-PCB-54	88.8	5.00 - 145	
13C-PCB-77	106	10.0 - 145	
13C-PCB-81	112	10.0 - 145	
13C-PCB-104	93.9	10.0 - 145	
13C-PCB-105	96.1	10.0 - 145	
13C-PCB-114	98.8	10.0 - 145	
13C-PCB-118	96.6	10.0 - 145	
13C-PCB-123	105	10.0 - 145	
13C-PCB-126	96.6	10.0 - 145	
13C-PCB-155	96.8	10.0 - 145	
13C-PCB-156	106	10.0 - 145	
13C-PCB-157	105	10.0 - 145	
13C-PCB-167	103	10.0 - 145	
13C-PCB-169	110	10.0 - 145	
13C-PCB-188	91.0	10.0 - 145	
13C-PCB-189	107	10.0 - 145	
13C-PCB-202	94.8	10.0 - 145	
13C-PCB-205	88.8	10.0 - 145	
13C-PCB-206	86.6	10.0 - 145	
13C-PCB-208	88.2	10.0 - 145	
13C-PCB-209	81.3	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	87.1	5.00 - 145	
13C-PCB-111	102	10.0 - 145	
13C-PCB-178	94.3	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

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EPA Modified Method 1668 PCBs



FAL ID: 8162-010-SA
Client ID: SM20131106-B-5B
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.98 g
% Solids: 96.15

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013
Total Conc: 14700000

Page 1 of 3

Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	94.8	-			PCB-51	7440	-		
PCB-2	44.7	-			PCB-52	1310000	-	C	69
PCB-3	118	-			PCB-53	62400	-		
PCB-4	931	-			PCB-54	370	-		
PCB-5	93.7	-			PCB-55	8300	-		
PCB-6	422	-			PCB-56	88200	-	C	60
PCB-7	89.2	-			PCB-57	680	-		
PCB-8	2400	-			PCB-58	209	-		
PCB-9	106	-			PCB-59	-	-	C042	42
PCB-10	47.1	-			PCB-60	-	-	C056	56
PCB-11	6390	-			PCB-61	519000	-	C	70
PCB-12	111	-			PCB-62	ND	8.23		
PCB-13	269	-			PCB-63	6420	-		
PCB-14	ND	4.26			PCB-64	-	-	C041	41/71/72
PCB-15	2190	-			PCB-65	ND	7.28		
PCB-16	19200	-			PCB-66	186000	-	C	76
PCB-17	10300	-			PCB-67	2240	-		
PCB-18	44900	-			PCB-68	1110	-		
PCB-19	5270	-			PCB-69	-	-	C052	52
PCB-20	34900	-	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	21600	-			PCB-72	-	-	C041	41/64/71
PCB-23	40.6	-	J		PCB-73	3440	-		
PCB-24	400	-			PCB-74	77900	-		
PCB-25	2030	-			PCB-75	-	-	C048	48
PCB-26	6090	-			PCB-76	-	-	C066	66
PCB-27	2420	-			PCB-77	30100	-		
PCB-28	24900	-			PCB-78	1680	-		
PCB-29	150	-			PCB-79	5610	-		
PCB-30	ND	3.18			PCB-80	ND	6.06		
PCB-31	44700	-			PCB-81	11600	-		
PCB-32	10000	-			PCB-82	92100	-		
PCB-33	-	-	C020	20/21	PCB-83	32400	-	C	112
PCB-34	93.6	-			PCB-84	515000	-	C	92
PCB-35	1140	-			PCB-85	100000	-	C	116
PCB-36	107	-			PCB-86	1910	-		
PCB-37	15300	-			PCB-87	359000	-	C	117/125
PCB-38	822	-			PCB-88	158000	-	C	91
PCB-39	65.3	-			PCB-89	7060	-		
PCB-40	42800	-			PCB-90	1020000	-	C	101
PCB-41	215000	-	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	45400	-	C	59	PCB-92	-	-	C084	84
PCB-43	261000	-	C	49	PCB-93	ND	10.6		
PCB-44	512000	-			PCB-94	4840	-		
PCB-45	32700	-			PCB-95	1220000	-		
PCB-46	15700	-			PCB-96	13700	-		
PCB-47	34400	-			PCB-97	238000	-		
PCB-48	25000	-	C	75	PCB-98	ND	8.76	C	102
PCB-49	-	-	C043	43	PCB-99	320000	-		
PCB-50	230	-			PCB-100	1900	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-010-SA
Client ID: SM20131106-B-5B
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.98 g
% Solids: 96.15

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	196000	-		
PCB-102	-	-	C098	98	PCB-152	957	-		
PCB-103	6210	-			PCB-153	720000	-		
PCB-104	40.5	-	J		PCB-154	3200	-		
PCB-105	284000	-			PCB-155	60.4	-		
PCB-106	662000	-	C	118	PCB-156	57000	-		
PCB-107	43200	-	C	108	PCB-157	14000	-		
PCB-108	-	-	C107	107	PCB-158	109000	-	C	160
PCB-109	73.5	-			PCB-159	5310	-		
PCB-110	644000	-			PCB-160	-	-	C158	158
PCB-111	15100	-	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	345	-			PCB-163	-	-	C138	138/164
PCB-114	15400	-			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	2790	-		
PCB-117	-	-	C087	87/125	PCB-167	29400	-		
PCB-118	-	-	C106	106	PCB-168	709	-		
PCB-119	8680	-			PCB-169	104	-		
PCB-120	1130	-			PCB-170	80600	-		
PCB-121	ND	8.03			PCB-171	46300	-		
PCB-122	6450	-			PCB-172	19600	-		
PCB-123	8410	-			PCB-173	4240	-		
PCB-124	28200	-			PCB-174	176000	-		
PCB-125	-	-	C087	87/117	PCB-175	7800	-		
PCB-126	7020	-			PCB-176	29200	-		
PCB-127	572	-			PCB-177	110000	-		
PCB-128	129000	-	C	162	PCB-178	34600	-		
PCB-129	40600	-			PCB-179	89000	-		
PCB-130	48200	-			PCB-180	231000	-		
PCB-131	21100	-	C	133	PCB-181	1350	-		
PCB-132	271000	-	C	161	PCB-182	198000	-	C	187
PCB-133	-	-	C131	131	PCB-183	99300	-		
PCB-134	49700	-	C	143	PCB-184	241	-		
PCB-135	122000	-			PCB-185	21600	-		
PCB-136	146000	-			PCB-186	47.5	-		
PCB-137	50200	-			PCB-187	-	-	C182	182
PCB-138	705000	-	C	163/164	PCB-188	78.9	-		
PCB-139	690000	-	C	149	PCB-189	1430	-		
PCB-140	2590	-			PCB-190	18800	-		
PCB-141	205000	-			PCB-191	4190	-		
PCB-142	177	-			PCB-192	42.4	-		
PCB-143	-	-	C134	134	PCB-193	10500	-		
PCB-144	36300	-			PCB-194	22800	-		
PCB-145	362	-			PCB-195	16600	-		
PCB-146	96000	-	C	165	PCB-196	32800	-	C	203
PCB-147	13500	-			PCB-197	2020	-		
PCB-148	67.6	-			PCB-198	1990	-		
PCB-149	-	-	C139	139	PCB-199	31900	-		
PCB-150	862	-			PCB-200	6080	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-010-SA
Client ID: SM20131106-B-5B
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.98 g
% Solids: 96.15

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters
PCB-201	7210	-		
PCB-202	7330	-		
PCB-203	-	-	C196	196
PCB-204	25.4	-	J	
PCB-205	828	-		
PCB-206	3520	-		
PCB-207	1220	-		
PCB-208	1350	-		
PCB-209	1170	-		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	86.6	5.00 - 145	
13C-PCB-3	85.2	5.00 - 145	
13C-PCB-4	86.0	5.00 - 145	
13C-PCB-15	94.2	5.00 - 145	
13C-PCB-19	88.5	5.00 - 145	
13C-PCB-37	90.3	5.00 - 145	
13C-PCB-54	83.5	5.00 - 145	
13C-PCB-77	92.6	10.0 - 145	
13C-PCB-81	100	10.0 - 145	
13C-PCB-104	89.1	10.0 - 145	
13C-PCB-105	94.0	10.0 - 145	
13C-PCB-114	96.0	10.0 - 145	
13C-PCB-118	94.3	10.0 - 145	
13C-PCB-123	103	10.0 - 145	
13C-PCB-126	89.4	10.0 - 145	
13C-PCB-155	85.7	10.0 - 145	
13C-PCB-156	95.6	10.0 - 145	
13C-PCB-157	88.9	10.0 - 145	
13C-PCB-167	93.7	10.0 - 145	
13C-PCB-169	76.4	10.0 - 145	
13C-PCB-188	93.3	10.0 - 145	
13C-PCB-189	66.5	10.0 - 145	
13C-PCB-202	94.5	10.0 - 145	
13C-PCB-205	84.4	10.0 - 145	
13C-PCB-206	91.0	10.0 - 145	
13C-PCB-208	90.1	10.0 - 145	
13C-PCB-209	93.6	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	86.2	5.00 - 145	
13C-PCB-111	89.5	10.0 - 145	
13C-PCB-178	95.4	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

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EPA Modified Method 1668 PCBs



FAL ID: 8162-011-SA
Client ID: SM20131106-B-6A
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.47 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013
Total Conc: 19900000

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	34.9	-	J		PCB-51	282	-		
PCB-2	25.7	-	J		PCB-52	53900	-	C	69
PCB-3	37.4	-	J		PCB-53	1100	-		
PCB-4	105	-			PCB-54	ND	7.02		
PCB-5	45.2	-	J		PCB-55	1940	-		
PCB-6	114	-			PCB-56	36600	-	C	60
PCB-7	35.1	-	J		PCB-57	121	-		
PCB-8	606	-			PCB-58	44.8	-	J	
PCB-9	51.4	-	J		PCB-59	-	-	C042	42
PCB-10	15.2	-	J		PCB-60	-	-	C056	56
PCB-11	4680	-			PCB-61	136000	-	C	70
PCB-12	57.4	-	J		PCB-62	ND	10.9		
PCB-13	83.9	-	J		PCB-63	1150	-		
PCB-14	ND	11.8			PCB-64	-	-	C041	41/71/72
PCB-15	329	-			PCB-65	ND	9.64		
PCB-16	688	-			PCB-66	48100	-	C	76
PCB-17	707	-			PCB-67	779	-		
PCB-18	2000	-			PCB-68	244	-		
PCB-19	92.8	-			PCB-69	-	-	C052	52
PCB-20	2630	-	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	1610	-			PCB-72	-	-	C041	41/64/71
PCB-23	ND	14.4			PCB-73	149	-		
PCB-24	24.8	-	J		PCB-74	17800	-		
PCB-25	228	-			PCB-75	-	-	C048	48
PCB-26	508	-			PCB-76	-	-	C066	66
PCB-27	141	-			PCB-77	33500	-		
PCB-28	2910	-			PCB-78	1870	-		
PCB-29	34.8	-	J		PCB-79	5560	-		
PCB-30	ND	5.09			PCB-80	ND	8.02		
PCB-31	3710	-			PCB-81	18500	-		
PCB-32	556	-			PCB-82	183000	-		
PCB-33	-	-	C020	20/21	PCB-83	35200	-	C	112
PCB-34	ND	13.7			PCB-84	224000	-	C	92
PCB-35	320	-			PCB-85	152000	-	C	116
PCB-36	48.0	-	J		PCB-86	1160	-		
PCB-37	1820	-			PCB-87	477000	-	C	117/125
PCB-38	100	-			PCB-88	43400	-	C	91
PCB-39	ND	14.6			PCB-89	2980	-		
PCB-40	4050	-			PCB-90	805000	-	C	101
PCB-41	18900	-	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	3550	-	C	59	PCB-92	-	-	C084	84
PCB-43	13600	-	C	49	PCB-93	ND	25.6		
PCB-44	29900	-			PCB-94	946	-		
PCB-45	861	-			PCB-95	259000	-		
PCB-46	424	-			PCB-96	796	-		
PCB-47	2710	-			PCB-97	307000	-		
PCB-48	1710	-	C	75	PCB-98	ND	21.1	C	102
PCB-49	-	-	C043	43	PCB-99	279000	-		
PCB-50	ND	12.4			PCB-100	398	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-011-SA
Client ID: SM20131106-B-6A
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.47 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	267000	-		
PCB-102	-	-	C098	98	PCB-152	930	-		
PCB-103	860	-			PCB-153	1650000	-		
PCB-104	ND	12.7			PCB-154	9180	-		
PCB-105	947000	-			PCB-155	115	-		
PCB-106	2050000	-	C	118	PCB-156	210000	-		
PCB-107	123000	-	C	108	PCB-157	58800	-		
PCB-108	-	-	C107	107	PCB-158	340000	-	C	160
PCB-109	217	-			PCB-159	8750	-		
PCB-110	1160000	-			PCB-160	-	-	C158	158
PCB-111	19400	-	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	230000	-			PCB-163	-	-	C138	138/164
PCB-114	46500	-			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	14100	-		
PCB-117	-	-	C087	87/125	PCB-167	113000	-		
PCB-118	-	-	C106	106	PCB-168	2820	-		
PCB-119	8220	-			PCB-169	240	-		
PCB-120	1760	-			PCB-170	260000	-		
PCB-121	ND	19.4			PCB-171	109000	-		
PCB-122	24400	-			PCB-172	44000	-		
PCB-123	26700	-			PCB-173	12000	-		
PCB-124	79100	-			PCB-174	366000	-		
PCB-125	-	-	C087	87/117	PCB-175	16900	-		
PCB-126	25200	-			PCB-176	62600	-		
PCB-127	1520	-			PCB-177	232000	-		
PCB-128	475000	-	C	162	PCB-178	68600	-		
PCB-129	160000	-			PCB-179	177000	-		
PCB-130	172000	-			PCB-180	486000	-		
PCB-131	59800	-	C	133	PCB-181	7930	-		
PCB-132	728000	-	C	161	PCB-182	362000	-	C	187
PCB-133	-	-	C131	131	PCB-183	202000	-		
PCB-134	124000	-	C	143	PCB-184	470	-		
PCB-135	215000	-			PCB-185	40500	-		
PCB-136	175000	-			PCB-186	223	-		
PCB-137	188000	-			PCB-187	-	-	C182	182
PCB-138	2070000	-	C	163/164	PCB-188	257	-		
PCB-139	1280000	-	C	149	PCB-189	4240	-		
PCB-140	6740	-			PCB-190	50100	-		
PCB-141	489000	-			PCB-191	10600	-		
PCB-142	383	-			PCB-192	115	-		
PCB-143	-	-	C134	134	PCB-193	21800	-		
PCB-144	58700	-			PCB-194	33900	-		
PCB-145	428	-			PCB-195	25000	-		
PCB-146	233000	-	C	165	PCB-196	62900	-	C	203
PCB-147	34200	-			PCB-197	4420	-		
PCB-148	116	-			PCB-198	3340	-		
PCB-149	-	-	C139	139	PCB-199	64800	-		
PCB-150	784	-			PCB-200	14000	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-011-SA
Client ID: SM20131106-B-6A
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.47 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters
PCB-201	15300	-		
PCB-202	16100	-		
PCB-203	-	-	C196	196
PCB-204	43.4	-	J	
PCB-205	1250	-		
PCB-206	4050	-		
PCB-207	1490	-		
PCB-208	1600	-		
PCB-209	409	-		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	93.9	5.00 - 145	
13C-PCB-3	93.7	5.00 - 145	
13C-PCB-4	94.2	5.00 - 145	
13C-PCB-15	103	5.00 - 145	
13C-PCB-19	93.4	5.00 - 145	
13C-PCB-37	91.5	5.00 - 145	
13C-PCB-54	94.7	5.00 - 145	
13C-PCB-77	91.5	10.0 - 145	
13C-PCB-81	98.0	10.0 - 145	
13C-PCB-104	97.6	10.0 - 145	
13C-PCB-105	89.7	10.0 - 145	
13C-PCB-114	96.2	10.0 - 145	
13C-PCB-118	87.6	10.0 - 145	
13C-PCB-123	102	10.0 - 145	
13C-PCB-126	94.7	10.0 - 145	
13C-PCB-155	87.3	10.0 - 145	
13C-PCB-156	114	10.0 - 145	
13C-PCB-157	113	10.0 - 145	
13C-PCB-167	109	10.0 - 145	
13C-PCB-169	117	10.0 - 145	
13C-PCB-188	97.7	10.0 - 145	
13C-PCB-189	120	10.0 - 145	
13C-PCB-202	109	10.0 - 145	
13C-PCB-205	92.9	10.0 - 145	
13C-PCB-206	93.5	10.0 - 145	
13C-PCB-208	90.0	10.0 - 145	
13C-PCB-209	89.1	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	86.1	5.00 - 145	
13C-PCB-111	89.7	10.0 - 145	
13C-PCB-178	102	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

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EPA Modified Method 1668 PCBs



FAL ID: 8162-012-SA
Client ID: SM20131106-B-6B
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.98 g
% Solids: 98.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013
Total Conc: 16700000

Page 1 of 3

Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	39.9	-	J		PCB-51	2950	-		
PCB-2	24.8	-	J		PCB-52	504000	-	C	69
PCB-3	51.5	-			PCB-53	17800	-		
PCB-4	667	-			PCB-54	121	-		
PCB-5	99.8	-			PCB-55	5010	-		
PCB-6	242	-			PCB-56	86200	-	C	60
PCB-7	32.1	-	J		PCB-57	399	-		
PCB-8	1350	-			PCB-58	140	-		
PCB-9	80.8	-			PCB-59	-	-	C042	42
PCB-10	27.7	-	J		PCB-60	-	-	C056	56
PCB-11	6470	-			PCB-61	565000	-	C	70
PCB-12	62.1	-			PCB-62	ND	4.28		
PCB-13	153	-			PCB-63	5020	-		
PCB-14	ND	4.44			PCB-64	-	-	C041	41/71/72
PCB-15	1060	-			PCB-65	ND	3.78		
PCB-16	8050	-			PCB-66	191000	-	C	76
PCB-17	5030	-			PCB-67	1730	-		
PCB-18	19400	-			PCB-68	688	-		
PCB-19	1970	-			PCB-69	-	-	C052	52
PCB-20	15200	-	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	11000	-			PCB-72	-	-	C041	41/64/71
PCB-23	17.7	-	J		PCB-73	805	-		
PCB-24	127	-			PCB-74	81200	-		
PCB-25	865	-			PCB-75	-	-	C048	48
PCB-26	2630	-			PCB-76	-	-	C066	66
PCB-27	1120	-			PCB-77	20800	-		
PCB-28	11900	-			PCB-78	1500	-		
PCB-29	63.8	-			PCB-79	5810	-		
PCB-30	ND	1.82			PCB-80	ND	3.15		
PCB-31	19300	-			PCB-81	14700	-		
PCB-32	4660	-			PCB-82	136000	-		
PCB-33	-	-	C020	20/21	PCB-83	37500	-	C	112
PCB-34	39.7	-	J		PCB-84	463000	-	C	92
PCB-35	1040	-			PCB-85	152000	-	C	116
PCB-36	55.2	-			PCB-86	1150	-		
PCB-37	11500	-			PCB-87	463000	-	C	117/125
PCB-38	333	-			PCB-88	150000	-	C	91
PCB-39	30.4	-	J		PCB-89	6430	-		
PCB-40	29700	-			PCB-90	1040000	-	C	101
PCB-41	139000	-	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	27000	-	C	59	PCB-92	-	-	C084	84
PCB-43	112000	-	C	49	PCB-93	ND	6.45		
PCB-44	264000	-			PCB-94	3110	-		
PCB-45	11800	-			PCB-95	922000	-		
PCB-46	6100	-			PCB-96	5760	-		
PCB-47	17800	-			PCB-97	294000	-		
PCB-48	11100	-	C	75	PCB-98	ND	5.32	C	102
PCB-49	-	-	C043	43	PCB-99	387000	-		
PCB-50	95.0	-			PCB-100	1270	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-012-SA
Client ID: SM20131106-B-6B
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.98 g
% Solids: 98.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	206000	-		
PCB-102	-	-	C098	98	PCB-152	952	-		
PCB-103	3170	-			PCB-153	1000000	-		
PCB-104	18.3	-	J		PCB-154	4420	-		
PCB-105	451000	-			PCB-155	68.4	-		
PCB-106	1110000	-	C	118	PCB-156	109000	-		
PCB-107	58900	-	C	108	PCB-157	25600	-		
PCB-108	-	-	C107	107	PCB-158	171000	-	C	160
PCB-109	ND	17.4			PCB-159	8620	-		
PCB-110	927000	-			PCB-160	-	-	C158	158
PCB-111	17900	-	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	ND	17.0			PCB-163	-	-	C138	138/164
PCB-114	26100	-			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	5140	-		
PCB-117	-	-	C087	87/125	PCB-167	50500	-		
PCB-118	-	-	C106	106	PCB-168	1040	-		
PCB-119	9750	-			PCB-169	151	-		
PCB-120	1350	-			PCB-170	195000	-		
PCB-121	ND	4.88			PCB-171	83600	-		
PCB-122	10800	-			PCB-172	36600	-		
PCB-123	13200	-			PCB-173	8420	-		
PCB-124	42400	-			PCB-174	301000	-		
PCB-125	-	-	C087	87/117	PCB-175	11500	-		
PCB-126	8490	-			PCB-176	39600	-		
PCB-127	790	-			PCB-177	196000	-		
PCB-128	229000	-	C	162	PCB-178	48800	-		
PCB-129	69400	-			PCB-179	115000	-		
PCB-130	75100	-			PCB-180	441000	-		
PCB-131	29100	-	C	133	PCB-181	2530	-		
PCB-132	473000	-	C	161	PCB-182	293000	-	C	187
PCB-133	-	-	C131	131	PCB-183	152000	-		
PCB-134	65100	-	C	143	PCB-184	288	-		
PCB-135	140000	-			PCB-185	36300	-		
PCB-136	166000	-			PCB-186	73.5	-		
PCB-137	80200	-			PCB-187	-	-	C182	182
PCB-138	1180000	-	C	163/164	PCB-188	102	-		
PCB-139	862000	-	C	149	PCB-189	2640	-		
PCB-140	3660	-			PCB-190	39900	-		
PCB-141	285000	-			PCB-191	8340	-		
PCB-142	160	-			PCB-192	ND	14.0		
PCB-143	-	-	C134	134	PCB-193	20500	-		
PCB-144	46300	-			PCB-194	32000	-		
PCB-145	402	-			PCB-195	27100	-		
PCB-146	131000	-	C	165	PCB-196	67900	-	C	203
PCB-147	19300	-			PCB-197	3530	-		
PCB-148	83.1	-			PCB-198	3760	-		
PCB-149	-	-	C139	139	PCB-199	69200	-		
PCB-150	856	-			PCB-200	13200	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-012-SA
Client ID: SM20131106-B-6B
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.98 g
% Solids: 98.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters
PCB-201	12200	-		
PCB-202	11800	-		
PCB-203	-	-	C196	196
PCB-204	30.8	-	J	
PCB-205	1120	-		
PCB-206	3990	-		
PCB-207	1650	-		
PCB-208	1770	-		
PCB-209	1170	-		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	84.4	5.00 - 145	
13C-PCB-3	80.3	5.00 - 145	
13C-PCB-4	85.1	5.00 - 145	
13C-PCB-15	86.9	5.00 - 145	
13C-PCB-19	84.0	5.00 - 145	
13C-PCB-37	89.4	5.00 - 145	
13C-PCB-54	78.9	5.00 - 145	
13C-PCB-77	85.8	10.0 - 145	
13C-PCB-81	92.8	10.0 - 145	
13C-PCB-104	83.0	10.0 - 145	
13C-PCB-105	94.6	10.0 - 145	
13C-PCB-114	90.0	10.0 - 145	
13C-PCB-118	88.7	10.0 - 145	
13C-PCB-123	92.9	10.0 - 145	
13C-PCB-126	92.5	10.0 - 145	
13C-PCB-155	79.7	10.0 - 145	
13C-PCB-156	93.3	10.0 - 145	
13C-PCB-157	89.5	10.0 - 145	
13C-PCB-167	90.0	10.0 - 145	
13C-PCB-169	90.3	10.0 - 145	
13C-PCB-188	79.9	10.0 - 145	
13C-PCB-189	80.6	10.0 - 145	
13C-PCB-202	81.9	10.0 - 145	
13C-PCB-205	81.1	10.0 - 145	
13C-PCB-206	81.7	10.0 - 145	
13C-PCB-208	78.7	10.0 - 145	
13C-PCB-209	79.6	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	85.4	5.00 - 145	
13C-PCB-111	86.4	10.0 - 145	
13C-PCB-178	82.4	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

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EPA Modified Method 1668 PCBs



FAL ID: 8162-013-SA
Client ID: SM20131106-B-7A
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 1.03 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013
Total Conc: 6690000

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	21.6	-	J		PCB-51	466	-		
PCB-2	22.6	-	J		PCB-52	125000	-	C	69
PCB-3	39.1	-			PCB-53	3120	-		
PCB-4	187	-			PCB-54	12.8	-	J	
PCB-5	62.2	-			PCB-55	2310	-		
PCB-6	152	-			PCB-56	31800	-	C	60
PCB-7	36.7	-	J		PCB-57	213	-		
PCB-8	762	-			PCB-58	156	-		
PCB-9	52.6	-			PCB-59	-	-	C042	42
PCB-10	13.2	-	J		PCB-60	-	-	C056	56
PCB-11	5450	-			PCB-61	219000	-	C	70
PCB-12	36.3	-	J		PCB-62	ND	5.51		
PCB-13	68.2	-			PCB-63	1810	-		
PCB-14	ND	7.06			PCB-64	-	-	C041	41/71/72
PCB-15	326	-			PCB-65	ND	4.87		
PCB-16	575	-			PCB-66	63000	-	C	76
PCB-17	644	-			PCB-67	1320	-		
PCB-18	2050	-			PCB-68	263	-		
PCB-19	124	-			PCB-69	-	-	C052	52
PCB-20	1940	-	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	1150	-			PCB-72	-	-	C041	41/64/71
PCB-23	ND	7.73			PCB-73	271	-		
PCB-24	45.8	-			PCB-74	25900	-		
PCB-25	190	-			PCB-75	-	-	C048	48
PCB-26	630	-			PCB-76	-	-	C066	66
PCB-27	96.8	-			PCB-77	12300	-		
PCB-28	1990	-			PCB-78	1190	-		
PCB-29	18.9	-	J		PCB-79	4450	-		
PCB-30	ND	2.69			PCB-80	ND	4.06		
PCB-31	3320	-			PCB-81	8720	-		
PCB-32	525	-			PCB-82	77600	-		
PCB-33	-	-	C020	20/21	PCB-83	21000	-	C	112
PCB-34	ND	7.35			PCB-84	197000	-	C	92
PCB-35	891	-			PCB-85	79100	-	C	116
PCB-36	21.1	-	J		PCB-86	990	-		
PCB-37	1670	-			PCB-87	244000	-	C	117/125
PCB-38	89.2	-			PCB-88	58100	-	C	91
PCB-39	21.4	-	J		PCB-89	3580	-		
PCB-40	5330	-			PCB-90	537000	-	C	101
PCB-41	31700	-	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	5120	-	C	59	PCB-92	-	-	C084	84
PCB-43	28000	-	C	49	PCB-93	ND	13.2		
PCB-44	59300	-			PCB-94	1500	-		
PCB-45	1170	-			PCB-95	339000	-		
PCB-46	887	-			PCB-96	1980	-		
PCB-47	3750	-			PCB-97	167000	-		
PCB-48	2140	-	C	75	PCB-98	ND	10.9	C	102
PCB-49	-	-	C043	43	PCB-99	204000	-		
PCB-50	17.6	-	J		PCB-100	765	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-013-SA
Client ID: SM20131106-B-7A
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 1.03 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	55300	-		
PCB-102	-	-	C098	98	PCB-152	555	-		
PCB-103	1640	-			PCB-153	361000	-		
PCB-104	ND	6.55			PCB-154	3900	-		
PCB-105	278000	-			PCB-155	ND	7.32		
PCB-106	635000	-	C	118	PCB-156	72200	-		
PCB-107	39100	-	C	108	PCB-157	19700	-		
PCB-108	-	-	C107	107	PCB-158	74400	-	C	160
PCB-109	131	-			PCB-159	1160	-		
PCB-110	515000	-			PCB-160	-	-	C158	158
PCB-111	11900	-	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	ND	13.9			PCB-163	-	-	C138	138/164
PCB-114	15400	-			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	2700	-		
PCB-117	-	-	C087	87/125	PCB-167	25800	-		
PCB-118	-	-	C106	106	PCB-168	608	-		
PCB-119	6020	-			PCB-169	101	-		
PCB-120	890	-			PCB-170	58800	-		
PCB-121	ND	9.98			PCB-171	14300	-		
PCB-122	7150	-			PCB-172	7520	-		
PCB-123	8110	-			PCB-173	1090	-		
PCB-124	27200	-			PCB-174	38800	-		
PCB-125	-	-	C087	87/117	PCB-175	2080	-		
PCB-126	4290	-			PCB-176	5340	-		
PCB-127	624	-			PCB-177	26100	-		
PCB-128	125000	-	C	162	PCB-178	6890	-		
PCB-129	37100	-			PCB-179	16000	-		
PCB-130	41000	-			PCB-180	80800	-		
PCB-131	14400	-	C	133	PCB-181	833	-		
PCB-132	173000	-	C	161	PCB-182	40100	-	C	187
PCB-133	-	-	C131	131	PCB-183	21700	-		
PCB-134	28000	-	C	143	PCB-184	123	-		
PCB-135	55200	-			PCB-185	3280	-		
PCB-136	62100	-			PCB-186	30.1	-	J	
PCB-137	43700	-			PCB-187	-	-	C182	182
PCB-138	478000	-	C	163/164	PCB-188	161	-		
PCB-139	320000	-	C	149	PCB-189	1550	-		
PCB-140	2500	-			PCB-190	7340	-		
PCB-141	85900	-			PCB-191	2060	-		
PCB-142	120	-			PCB-192	ND	13.0		
PCB-143	-	-	C134	134	PCB-193	3450	-		
PCB-144	17100	-			PCB-194	8290	-		
PCB-145	244	-			PCB-195	2630	-		
PCB-146	52300	-	C	165	PCB-196	10100	-	C	203
PCB-147	10200	-			PCB-197	475	-		
PCB-148	30.4	-	J		PCB-198	454	-		
PCB-149	-	-	C139	139	PCB-199	12500	-		
PCB-150	779	-			PCB-200	1370	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-013-SA
Client ID: SM20131106-B-7A
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 1.03 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

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Compound	Conc	DL	Qual	Coeluters
PCB-201	1880	-		
PCB-202	2400	-		
PCB-203	-	-	C196	196
PCB-204	ND	8.53		
PCB-205	258	-		
PCB-206	2410	-		
PCB-207	523	-		
PCB-208	609	-		
PCB-209	384	-		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	87.9	5.00 - 145	
13C-PCB-3	85.8	5.00 - 145	
13C-PCB-4	87.6	5.00 - 145	
13C-PCB-15	91.2	5.00 - 145	
13C-PCB-19	87.2	5.00 - 145	
13C-PCB-37	88.0	5.00 - 145	
13C-PCB-54	84.9	5.00 - 145	
13C-PCB-77	88.7	10.0 - 145	
13C-PCB-81	96.8	10.0 - 145	
13C-PCB-104	86.2	10.0 - 145	
13C-PCB-105	94.2	10.0 - 145	
13C-PCB-114	88.9	10.0 - 145	
13C-PCB-118	92.3	10.0 - 145	
13C-PCB-123	90.9	10.0 - 145	
13C-PCB-126	93.4	10.0 - 145	
13C-PCB-155	81.7	10.0 - 145	
13C-PCB-156	95.9	10.0 - 145	
13C-PCB-157	95.5	10.0 - 145	
13C-PCB-167	93.3	10.0 - 145	
13C-PCB-169	99.0	10.0 - 145	
13C-PCB-188	80.4	10.0 - 145	
13C-PCB-189	96.5	10.0 - 145	
13C-PCB-202	84.0	10.0 - 145	
13C-PCB-205	88.4	10.0 - 145	
13C-PCB-206	82.8	10.0 - 145	
13C-PCB-208	80.3	10.0 - 145	
13C-PCB-209	76.5	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	80.2	5.00 - 145	
13C-PCB-111	86.0	10.0 - 145	
13C-PCB-178	78.3	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

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EPA Modified Method 1668 PCBs



FAL ID: 8162-014-SA
Client ID: SM20131106-B-7B
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.96 g
% Solids: 96.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013
Total Conc: 2570000

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Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	39.7	-	J		PCB-51	705	-		
PCB-2	23.5	-	J		PCB-52	141000	-	C	69
PCB-3	47.2	-			PCB-53	3590	-		
PCB-4	269	-			PCB-54	11.8	-	J	
PCB-5	58.8	-			PCB-55	1830	-		
PCB-6	188	-			PCB-56	16700	-	C	60
PCB-7	45.6	-			PCB-57	131	-		
PCB-8	1150	-			PCB-58	37.9	-	J	
PCB-9	70.5	-			PCB-59	-	-	C042	42
PCB-10	16.7	-	J		PCB-60	-	-	C056	56
PCB-11	20400	-			PCB-61	158000	-	C	70
PCB-12	47.6	-			PCB-62	ND	8.82		
PCB-13	104	-			PCB-63	1560	-		
PCB-14	ND	5.39			PCB-64	-	-	C041	41/71/72
PCB-15	478	-			PCB-65	ND	7.80		
PCB-16	866	-			PCB-66	47900	-	C	76
PCB-17	993	-			PCB-67	500	-		
PCB-18	3130	-			PCB-68	557	-		
PCB-19	203	-			PCB-69	-	-	C052	52
PCB-20	2990	-	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	1910	-			PCB-72	-	-	C041	41/64/71
PCB-23	ND	7.49			PCB-73	120	-		
PCB-24	23.3	-	J		PCB-74	22400	-		
PCB-25	235	-			PCB-75	-	-	C048	48
PCB-26	639	-			PCB-76	-	-	C066	66
PCB-27	178	-			PCB-77	2580	-		
PCB-28	2760	-			PCB-78	505	-		
PCB-29	25.1	-	J		PCB-79	1880	-		
PCB-30	ND	2.61			PCB-80	ND	6.49		
PCB-31	4990	-			PCB-81	3800	-		
PCB-32	772	-			PCB-82	23400	-		
PCB-33	-	-	C020	20/21	PCB-83	9320	-	C	112
PCB-34	11.1	-	J		PCB-84	110000	-	C	92
PCB-35	356	-			PCB-85	32600	-	C	116
PCB-36	27.6	-	J		PCB-86	497	-		
PCB-37	1700	-			PCB-87	106000	-	C	117/125
PCB-38	109	-			PCB-88	35000	-	C	91
PCB-39	ND	7.59			PCB-89	1820	-		
PCB-40	5630	-			PCB-90	290000	-	C	101
PCB-41	30800	-	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	5120	-	C	59	PCB-92	-	-	C084	84
PCB-43	31400	-	C	49	PCB-93	ND	9.24		
PCB-44	62800	-			PCB-94	922	-		
PCB-45	1750	-			PCB-95	219000	-		
PCB-46	907	-			PCB-96	1400	-		
PCB-47	4880	-			PCB-97	73000	-		
PCB-48	2500	-	C	75	PCB-98	ND	7.63	C	102
PCB-49	-	-	C043	43	PCB-99	108000	-		
PCB-50	16.4	-	J		PCB-100	404	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-014-SA
Client ID: SM20131106-B-7B
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.96 g
% Solids: 96.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

Page 2 of 3

Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	20800	-		
PCB-102	-	-	C098	98	PCB-152	261	-		
PCB-103	1050	-			PCB-153	77700	-		
PCB-104	ND	4.59			PCB-154	1240	-		
PCB-105	49800	-			PCB-155	31.6	-	J	
PCB-106	180000	-	C	118	PCB-156	4690	-		
PCB-107	11800	-	C	108	PCB-157	1060	-		
PCB-108	-	-	C107	107	PCB-158	11900	-	C	160
PCB-109	46.4	-			PCB-159	168	-		
PCB-110	181000	-			PCB-160	-	-	C158	158
PCB-111	5230	-	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	132	-			PCB-163	-	-	C138	138/164
PCB-114	4650	-			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	466	-		
PCB-117	-	-	C087	87/125	PCB-167	2110	-		
PCB-118	-	-	C106	106	PCB-168	207	-		
PCB-119	2910	-			PCB-169	ND	8.17		
PCB-120	176	-			PCB-170	2440	-		
PCB-121	27800	-			PCB-171	1420	-		
PCB-122	1500	-			PCB-172	536	-		
PCB-123	2560	-			PCB-173	154	-		
PCB-124	7650	-			PCB-174	4740	-		
PCB-125	-	-	C087	87/117	PCB-175	331	-		
PCB-126	317	-			PCB-176	1160	-		
PCB-127	200	-			PCB-177	2920	-		
PCB-128	12600	-	C	162	PCB-178	1270	-		
PCB-129	5060	-			PCB-179	3340	-		
PCB-130	7060	-			PCB-180	5750	-		
PCB-131	3860	-	C	133	PCB-181	165	-		
PCB-132	34700	-	C	161	PCB-182	7060	-	C	187
PCB-133	-	-	C131	131	PCB-183	3490	-		
PCB-134	7810	-	C	143	PCB-184	60.5	-		
PCB-135	18100	-			PCB-185	714	-		
PCB-136	23900	-			PCB-186	ND	5.14		
PCB-137	7670	-			PCB-187	-	-	C182	182
PCB-138	69000	-	C	163/164	PCB-188	22.3	-	J	
PCB-139	92300	-	C	149	PCB-189	41.1	-	J	
PCB-140	681	-			PCB-190	508	-		
PCB-141	16500	-			PCB-191	123	-		
PCB-142	64.2	-			PCB-192	ND	5.76		
PCB-143	-	-	C134	134	PCB-193	257	-		
PCB-144	5680	-			PCB-194	292	-		
PCB-145	117	-			PCB-195	230	-		
PCB-146	11800	-	C	165	PCB-196	1190	-	C	203
PCB-147	3630	-			PCB-197	85.1	-		
PCB-148	16.5	-	J		PCB-198	92.0	-		
PCB-149	-	-	C139	139	PCB-199	1320	-		
PCB-150	246	-			PCB-200	300	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-014-SA
Client ID: SM20131106-B-7B
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.96 g
% Solids: 96.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

Page 3 of 3

Compound	Conc	DL	Qual	Coeluters
PCB-201	407	-		
PCB-202	505	-		
PCB-203	-	-	C196	196
PCB-204	ND	5.74		
PCB-205	15.1	-	J	
PCB-206	156	-		
PCB-207	83.4	-		
PCB-208	127	-		
PCB-209	83.8	-		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	95.9	5.00 - 145	
13C-PCB-3	84.1	5.00 - 145	
13C-PCB-4	89.6	5.00 - 145	
13C-PCB-15	96.2	5.00 - 145	
13C-PCB-19	91.8	5.00 - 145	
13C-PCB-37	97.4	5.00 - 145	
13C-PCB-54	77.3	5.00 - 145	
13C-PCB-77	95.9	10.0 - 145	
13C-PCB-81	104	10.0 - 145	
13C-PCB-104	95.4	10.0 - 145	
13C-PCB-105	100	10.0 - 145	
13C-PCB-114	96.0	10.0 - 145	
13C-PCB-118	97.0	10.0 - 145	
13C-PCB-123	103	10.0 - 145	
13C-PCB-126	97.4	10.0 - 145	
13C-PCB-155	85.7	10.0 - 145	
13C-PCB-156	103	10.0 - 145	
13C-PCB-157	91.0	10.0 - 145	
13C-PCB-167	100	10.0 - 145	
13C-PCB-169	102	10.0 - 145	
13C-PCB-188	92.1	10.0 - 145	
13C-PCB-189	100	10.0 - 145	
13C-PCB-202	93.9	10.0 - 145	
13C-PCB-205	87.4	10.0 - 145	
13C-PCB-206	90.9	10.0 - 145	
13C-PCB-208	85.3	10.0 - 145	
13C-PCB-209	87.2	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	76.8	5.00 - 145	
13C-PCB-111	92.1	10.0 - 145	
13C-PCB-178	92.7	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

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EPA Modified Method 1668 PCBs



FAL ID: 8162-015-SA
Client ID: SM20131106-B-8A
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.53 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013
Total Conc: 7150000

Page 1 of 3

Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	150	-			PCB-51	1360	-		
PCB-2	91.8	-			PCB-52	279000	-	C	69
PCB-3	280	-			PCB-53	8080	-		
PCB-4	896	-			PCB-54	37.6	-	J	
PCB-5	443	-			PCB-55	3300	-		
PCB-6	821	-			PCB-56	42400	-	C	60
PCB-7	148	-			PCB-57	331	-		
PCB-8	4270	-			PCB-58	157	-		
PCB-9	311	-			PCB-59	-	-	C042	42
PCB-10	45.6	-	J		PCB-60	-	-	C056	56
PCB-11	13200	-			PCB-61	300000	-	C	70
PCB-12	283	-			PCB-62	ND	18.0		
PCB-13	548	-			PCB-63	3020	-		
PCB-14	ND	10.7			PCB-64	-	-	C041	41/71/72
PCB-15	2460	-			PCB-65	ND	15.9		
PCB-16	2970	-			PCB-66	94000	-	C	76
PCB-17	3620	-			PCB-67	1750	-		
PCB-18	10900	-			PCB-68	608	-		
PCB-19	552	-			PCB-69	-	-	C052	52
PCB-20	10600	-	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	5840	-			PCB-72	-	-	C041	41/64/71
PCB-23	23.3	-	J		PCB-73	360	-		
PCB-24	84.2	-			PCB-74	42200	-		
PCB-25	1000	-			PCB-75	-	-	C048	48
PCB-26	2610	-			PCB-76	-	-	C066	66
PCB-27	655	-			PCB-77	13600	-		
PCB-28	12300	-			PCB-78	1330	-		
PCB-29	99.4	-			PCB-79	4500	-		
PCB-30	ND	5.52			PCB-80	ND	13.2		
PCB-31	17700	-			PCB-81	8980	-		
PCB-32	3040	-			PCB-82	70200	-		
PCB-33	-	-	C020	20/21	PCB-83	22700	-	C	112
PCB-34	45.5	-	J		PCB-84	246000	-	C	92
PCB-35	1600	-			PCB-85	77300	-	C	116
PCB-36	74.2	-	J		PCB-86	1170	-		
PCB-37	5190	-			PCB-87	250000	-	C	117/125
PCB-38	312	-			PCB-88	71000	-	C	91
PCB-39	48.0	-	J		PCB-89	4150	-		
PCB-40	9590	-			PCB-90	616000	-	C	101
PCB-41	59900	-	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	11000	-	C	59	PCB-92	-	-	C084	84
PCB-43	65400	-	C	49	PCB-93	ND	21.2		
PCB-44	119000	-			PCB-94	2030	-		
PCB-45	3590	-			PCB-95	441000	-		
PCB-46	1930	-			PCB-96	2860	-		
PCB-47	10100	-			PCB-97	173000	-		
PCB-48	6230	-	C	75	PCB-98	ND	17.5	C	102
PCB-49	-	-	C043	43	PCB-99	232000	-		
PCB-50	40.5	-	J		PCB-100	946	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-015-SA
Client ID: SM20131106-B-8A
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.53 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

Page 2 of 3

Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	66600	-		
PCB-102	-	-	C098	98	PCB-152	616	-		
PCB-103	2250	-			PCB-153	318000	-		
PCB-104	ND	10.5			PCB-154	3430	-		
PCB-105	221000	-			PCB-155	31.2	-	J	
PCB-106	576000	-	C	118	PCB-156	54900	-		
PCB-107	35700	-	C	108	PCB-157	15100	-		
PCB-108	-	-	C107	107	PCB-158	61900	-	C	160
PCB-109	131	-			PCB-159	1650	-		
PCB-110	493000	-			PCB-160	-	-	C158	158
PCB-111	12800	-	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	595	-			PCB-163	-	-	C138	138/164
PCB-114	12700	-			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	2900	-		
PCB-117	-	-	C087	87/125	PCB-167	19200	-		
PCB-118	-	-	C106	106	PCB-168	686	-		
PCB-119	6930	-			PCB-169	88.5	-		
PCB-120	958	-			PCB-170	47300	-		
PCB-121	ND	16.0			PCB-171	13400	-		
PCB-122	6120	-			PCB-172	6910	-		
PCB-123	7460	-			PCB-173	1310	-		
PCB-124	26000	-			PCB-174	44000	-		
PCB-125	-	-	C087	87/117	PCB-175	2260	-		
PCB-126	3280	-			PCB-176	7110	-		
PCB-127	712	-			PCB-177	25600	-		
PCB-128	96100	-	C	162	PCB-178	9510	-		
PCB-129	30800	-			PCB-179	24900	-		
PCB-130	34400	-			PCB-180	83300	-		
PCB-131	12900	-	C	133	PCB-181	1450	-		
PCB-132	150000	-	C	161	PCB-182	55600	-	C	187
PCB-133	-	-	C131	131	PCB-183	26400	-		
PCB-134	26400	-	C	143	PCB-184	117	-		
PCB-135	54600	-			PCB-185	6190	-		
PCB-136	64400	-			PCB-186	39.3	-	J	
PCB-137	37400	-			PCB-187	-	-	C182	182
PCB-138	388000	-	C	163/164	PCB-188	135	-		
PCB-139	309000	-	C	149	PCB-189	1330	-		
PCB-140	2100	-			PCB-190	8540	-		
PCB-141	80000	-			PCB-191	1800	-		
PCB-142	134	-			PCB-192	ND	18.0		
PCB-143	-	-	C134	134	PCB-193	3500	-		
PCB-144	19600	-			PCB-194	9160	-		
PCB-145	279	-			PCB-195	3970	-		
PCB-146	45100	-	C	165	PCB-196	15000	-	C	203
PCB-147	9160	-			PCB-197	754	-		
PCB-148	57.6	-	J		PCB-198	790	-		
PCB-149	-	-	C139	139	PCB-199	16700	-		
PCB-150	677	-			PCB-200	2660	-		

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EPA Modified Method 1668 PCBs



FAL ID: 8162-015-SA
Client ID: SM20131106-B-8A
Matrix: Solid
Batch No: X2972

Date Extracted: 11-14-2013
Date Received: 11-07-2013
Amount: 0.53 g
% Solids: 100.00

ICal: DAILY209FAL4-11-15-13A
GC Column: DB1
Units: pg/g

Acquired: 11-16-2013

Page 3 of 3

Compound	Conc	DL	Qual	Coeluters
PCB-201	3160	-		
PCB-202	4000	-		
PCB-203	-	-	C196	196
PCB-204	22.0	-	J	
PCB-205	333	-		
PCB-206	2890	-		
PCB-207	719	-		
PCB-208	850	-		
PCB-209	454	-		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	88.1	5.00 - 145	
13C-PCB-3	86.4	5.00 - 145	
13C-PCB-4	86.8	5.00 - 145	
13C-PCB-15	90.2	5.00 - 145	
13C-PCB-19	84.3	5.00 - 145	
13C-PCB-37	85.3	5.00 - 145	
13C-PCB-54	85.4	5.00 - 145	
13C-PCB-77	87.4	10.0 - 145	
13C-PCB-81	96.8	10.0 - 145	
13C-PCB-104	87.1	10.0 - 145	
13C-PCB-105	90.2	10.0 - 145	
13C-PCB-114	90.9	10.0 - 145	
13C-PCB-118	85.6	10.0 - 145	
13C-PCB-123	92.2	10.0 - 145	
13C-PCB-126	87.2	10.0 - 145	
13C-PCB-155	83.0	10.0 - 145	
13C-PCB-156	93.7	10.0 - 145	
13C-PCB-157	92.7	10.0 - 145	
13C-PCB-167	90.7	10.0 - 145	
13C-PCB-169	93.8	10.0 - 145	
13C-PCB-188	79.6	10.0 - 145	
13C-PCB-189	93.0	10.0 - 145	
13C-PCB-202	83.3	10.0 - 145	
13C-PCB-205	84.2	10.0 - 145	
13C-PCB-206	80.2	10.0 - 145	
13C-PCB-208	79.2	10.0 - 145	
13C-PCB-209	72.4	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	81.5	5.00 - 145	
13C-PCB-111	86.2	10.0 - 145	
13C-PCB-178	81.1	10.0 - 145	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Coelution
- D Presence of Diphenyl Ethers
- DNQ Analyte concentration is below calibration range
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected at Detection Limit Level
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 11/20/2013

Reviewed By: 
Date: 11/20/2013

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Frontier Analytical Laboratory
5172 Hillsdale Circle
El Dorado Hills, CA 95762
Tel: 916-934-0900
Fax: 916-934-0999

FAL USE ONLY

Laboratory Project No.: 8162
Temperature: 0 °C

Chain of Custody

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Please Print in Pen Page 1 of 2

CLIENT INFORMATION					INVOICE INFORMATION (if different from client info)										PROJECT INFORMATION					
Company Name: Phylmar Group					Company Name: Same										FAL Quote #: 2711A					
Contact Name: Mark Katchen					Contact Name: _____										P.O. #: _____					
Address: 2342 Manning Ave., Los Angeles, CA 90064					Address: _____										Project #: 365-001A					
Phone: 310-474-3937 Fax: _____					Phone: _____ Fax: _____										Project Name: MHS/Cabrillo Monitoring					
Email: mkatchen@phylmar.com					Email: _____										TAT (business days): ☐ 15 ☒ 10 ☐ 5* ☐ 3* (✓ one)					
* FAL must agree with price and RUSH TAT in writing.																				
REPORT INFORMATION					REPORT DISTRIBUTION (email only is preferred)										ADDITIONAL INSTRUCTIONS					
Report Level: ☐ I/II ☐ III ☐ IV					☐ Hardcopy															
☐ EDD: ☐ FAL Basic ☐ Geotracker					☐ CD (.pdf including EDDs if requested)															
☐ Other: _____ ☐ Custom: Contact FAL					☒ Email (.pdf including EDDs if requested)															
☐ California State Drinking Water Form																				
System #: _____ Source #: _____																				
Sampler: _____ Employer: _____																				
Sample ID					Date	Time	Matrix	# of containers	EPA 1613**	EPA 8290**	DLM 02.0	EPA 8280**	Appendix IX	EPA TO-9/9A	EPA 23/23A	EPA 1668	FAL 15	Other	**CONGENERS	**TEQ
					Collected														☐ 2,3,7,8-TCDD only	☐ 1998 WHO
																			☐ 2,3,7,8-TCDD/F only	☐ 2005 WHO
																			☐ PCDD/F (Cl ₄ -Cl ₈)	☐ Other
																			Remarks	
1	SM20131106-B-1A	11/6/13		Bulk	1										✓					
2	B-1B			Paint											✓				Area = 100 cm ²	
3	B-2A			Bulk											✓					
4	B-2B			Paint											✓				Area = 100 cm ²	
5	B-3A			Bulk											✓					
6	B-3B			Paint											✓				Area = 100 cm ²	
7	B-4A			Bulk											✓					
8	B-4B			Paint											✓				Area = 100 cm ²	
9	B-5A			Bulk											✓					
10	B-5B			Paint											✓				Area = 100 cm ²	
11	B-6A			Bulk											✓					
12	B-6B			Paint											✓				Area = 100 cm ²	
13	B-7A			Bulk											✓					
14	B-7B			Paint											✓				Area = 100 cm ²	
15	B-8A			Bulk											✓					
Samples will be disposed of 90 days after sample receipt unless other arrangements have been made and agreed upon in writing.																				
Relinquished by: (Signature and Printed Name)								Date	Time	Received by: (Signature and Printed Name)								Date	Time	
Steven Modland								11/6/13	—	Kathy Zipp EZ DP								11-7-13	845	

Client understands that all terms described in the proposals, quotations, and/or the general terms provided in the current FAL price schedules will be followed.
FAL reserves the rights to terminate its service or withhold delivery of reports, if in FAL's sole discretion the terms of the project have been broken.

White Copy - Report

Yellow Copy - Laboratory

Pink Copy - Originator

Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **8162**

Client:	The Phylmar Group
Client Project ID:	365-001A
Date Received:	11/07/2013
Time Received:	08:45 am
Received By:	KZ
Logged In By:	KZ
# of Samples Received:	15
Duplicates:	0
Storage Location:	F2

Method of Delivery:	Other
Tracking Number:	523149390
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	0
Cooling Method	Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	No
Test aqueous sample for residual Chlorine	No
Sodium Thiosulfate Added	No
Adequate Sample Volume	Yes
Appropriate Sample Container	Yes
pH Range of Aqueous Sample	N/A
Anomalies or additional comments:	

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Temperature: 0 °C

Please Print in Pen Page 1 of 2

CLIENT INFORMATION Company Name: Phylmar Group Contact Name: Mark Katchen Address: 2342 Manning Ave. Los Angeles, CA 90064 Phone: 310-474-3937 Fax: Email: mkatchen@phylmar.com	INVOICE INFORMATION (if different from client info) Company Name: Same Contact Name: Address: Phone: Fax: Email:	PROJECT INFORMATION FAL Quote #: 2711A P.O. #: Project #: <u>365-001A</u> Project Name: <u>plusi Carb/110 Mapping</u> TAT (business days): ☐ 15 ☒ 10 ☐ 5* ☐ 3* (V one) * FAL must agree with price and RUSH TAT in writing.
REPORT INFORMATION Report Level: ☐ I/II ☐ III ☐ IV	REPORT DISTRIBUTION (email only is preferred) ☐ Hardcopy	ADDITIONAL INSTRUCTIONS

